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ABSTRACT

The results of several surveys conducted to assess current employment needs and student and parent interests in greater Nashville (Tennessee) are reported. The needs assessment was conducted in an effort to generate information which would be useful for planning expanded vocational education programs in the metropolitan public schools of Nashville-Davidson County. The findings of the surveys are reported in five chapters as follows: (1) Nashville area employment needs survey for 1976, (2) entrance requirements for highest demand occupations, (3) student and parent survey findings, (4) perceptions of curricular needs by school personnel, and (5) recommendations. (Author/VA)

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A NEEDS ASSESSMENT OF EMPLOYMENT DEMANDS/INTERESTS FOR NASHVILLE-DAVIDSON COUNTY METROPOLITAN PUBLIC SCHOOLS

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The Center for Vocational Education
The Ohio State University
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May 1975

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- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
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- Operating information systems and services
- Conducting leadership development and training programs

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INTRODUCTION

The Metropolitan Public Schools of Nashville-Davidson County are engaged in a massive expansion of vocational education programs. School leaders are concerned that individual interests and community needs be served well through the expanded programs. As a result, the Board of Education of Metropolitan Public Schools requested The Center for Vocational Education, The Ohio State University, to survey student and parent interests and employment demands in Greater Nashville. Several surveys were made under the project titled "A Needs Assessment of Employment Demands/ Interests for Nashville-Davidson County Metropolitan Public Schools."

Work on the surveys was carried out in close coordination with the administration of Metropolitan Public Schools and its staff in the areas of research and evaluation, data processing, guidance and counseling, and the Department of Vocational Education. The coordination linkages with these Metro offices were for the purposes of: (1) conducting the surveys with the least possible disruption of normal school operations, (2) designing the surveys to permit departments to replicate the survey efforts in later years, if desired, using established records and existing computer capabilities, and (3) being sure that surveys included

individual interests and employment opportunities that are unique to Greater Nashville.

The findings of the surveys are reported in five chapters as follows: Chapter I, Nashville Area Employment Needs Survey for 1976; Chapter II, Entrance Requirements for Highest Demand Occupations; Chapter III, Student and Parent Survey Findings; Chapter IV, Perceptions of Curricular Needs by School Personnel; and Chapter V, Recommendations.

Each of the first four chapters is preceded by a summary of the findings reported in the chapter. Additional items of background information supporting the chapters are included in the appendix and referenced within each chapter.

SUMMARY

CHAPTER I

EMPLOYMENT NEEDS IN GREATER NASHVILLE

One of the critical factors to be considered in planning for an expansion of vocational education programs is the semi-skilled and skilled level employment needs or demands of the area served by the school. Three surveys were conducted for this purpose: a general employment demands survey, a special survey of agribusiness occupations, and a special survey of music industry occupations. The titles of the surveys were as follows:

1. "Nashville Area Employment Survey for 1976"
2. "Agricultural Occupations Other Than Farming in Davidson County"
3. "Survey of Music and Allied Fields"

A brief summary of the findings of the surveys is presented in this section. More detailed findings and descriptions of the surveys are in the body of Chapter I.

The ranking of clusters of occupations from the three surveys gives an approximate reading of employment opportunities. These clusters are presented in Table 1 in descending order from highest to lowest number of job openings in 1976 as estimated by community leaders, agribusiness leaders, and music leaders.

TABLE 1

SUMMARY OF JOB OPENINGS BY OCCUPATIONAL CLUSTER
BASED ON AVERAGE OF ESTIMATES BY JOB TITLE,
BY COMMUNITY/BUSINESS LEADERS (n=92),
AGRIBUSINESS LEADERS (n=44), AND
MUSIC/COMMUNICATIONS ARTS LEADERS (n=11)

Rank	Occupation	Job Openings 1976
1	Clerical	2808
2	Hospitality Industry	1050
3	Construction and Metalworking	766
4	Human Services	765
5	Mechanics, Repairmen, and Installers	684
6	Health Services	557
7	Entertainment and Related Fields	455*
8	Agribusiness	284*
9	Publishing/Printing	201
	TOTALS	7570

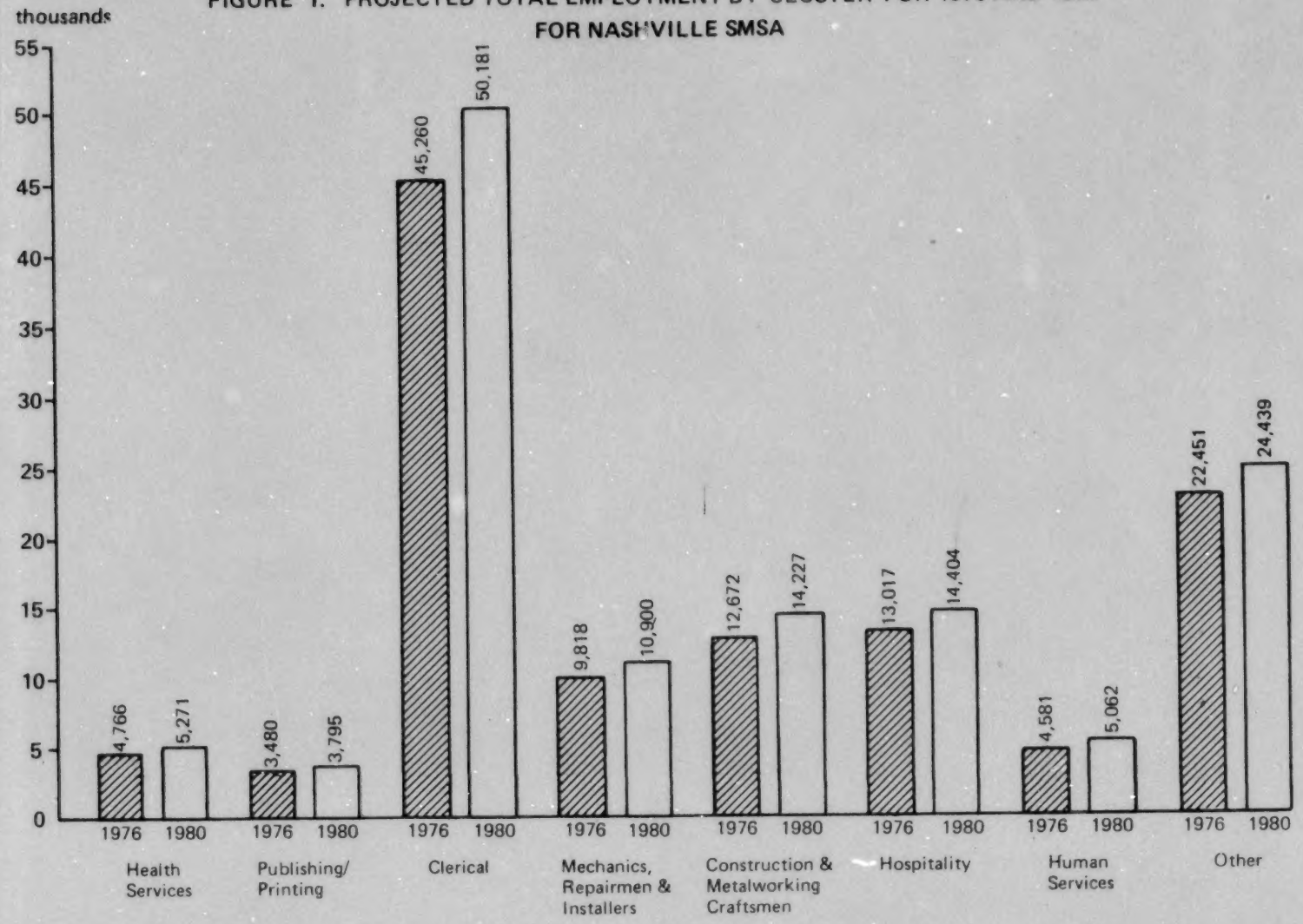
*Estimated job openings for entertainment and related fields (455) and agribusiness (284) clusters are from the music industry leaders survey and the agribusiness leaders survey, and are for Nashville-Davidson County only. Estimated job openings for the other clusters are for the eight county Standard Metropolitan Statistical Area (SMSA) of Davidson and seven adjoining counties.

Annual job openings by cluster through 1980 are expected to remain near these 1976 estimates. This expectation is based on the annual job opening trends for the 1976-1980 period, as projected by the Interim Manpower Projection Program (IMP). The total projected employment for 1976 and 1980 are shown in Figure 1 for each cluster except agribusiness and entertainment and related fields which were not available from IMP. The ranks of clusters by total employment is the same as ranks of clusters by job openings, e.g., clerical, first (45,260 for 1976 and 50,181 for 1980) and publishing/printing, last (3,480 for 1976 and 3,795 for 1980).

Rankings of Occupational Titles by Job Openings

Survey respondents' rankings of occupational titles by average estimated job openings for 1976 are provided in Table 2. All estimates are for the eight county SMSA of which over two-thirds of the job openings are believed to be in Davidson County, according to the Tennessee Department of Economic and Community Development. The job openings for 1976 are good indicators of the annual openings expected to occur through 1980 according to Interim Manpower Projection Program data. The occupational titles listed in Table 2 are listed from highest to lowest number of job openings.

FIGURE 1. PROJECTED TOTAL EMPLOYMENT BY CLUSTER FOR 1976 AND 1980* FOR NASHVILLE SMSA



*Compiled from Interim Manpower Projection Program, SMSA, Nashville, Tennessee.

TABLE 2

RANKS OF OCCUPATIONS BY JOB OPENINGS
IN NASHVILLE AREA EMPLOYMENT NEEDS SURVEY FOR 1976
BY COMMUNITY LEADERS

Rank	Occupation	Estimated Job Openings 1976
1	Secretaries	1,120
2	Retail salespersons	680
3	Bookkeepers	415
4	Typists	351
5	Institutional home aides	344
6	Cashiers	294
7	Janitors and sextons	293
8	Clerks, payroll/shipping, etc.	288
9	Sewers and stitchers, etc.	272
10	Waiters, waitresses	261
11	Nurse aides, orderlies	229
12	Cooks, chefs	216
13	Truck drivers	208
14	Cosmetologists	182
15	Practical nurses	178
16	Carpenters	168
17	Receptionists	150
18	Auto mechanics	143
19	Delivery and routemen	122
20	Plumbers and pipe fitters	116
21	Diesel and heavy equipment	110
22	Child care workers	105
23	Electricians	98
24	Keypunch operators	91
25	Welders	88
26	Recreation and amusement attendants	79
27	Health aides	77
28	Machinists	75
29	Housekeepers	73
30	Editors and reporters	73
31	Building maintenance repairmen	71
32	Busboys, dishwashers	64
33	Bank tellers	63
34	Brickmasons and stonemasons	61
35	Auto service station attendants	60

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Table 2 (Continued)

Rank	Occupation	Estimated Job Openings 1976
36	Aircraft mechanics	58
37	Refrigeration and air conditioning	57
38	Painters	55
39	Outdoor vehicle and equipment mechanics	54
40	Telephone installers & repairmen	50
41	Auto body repairmen	50
42	Teacher aides	49
43	Library attendants, assistants	49
44	Appliance repairmen	48
45	Meat cutters and wrappers	47
46	Horticultural assistants	46
47	Groundskeepers, gardeners, (except farm)	44
48	Computer programmers	44
49	Farmers	43
50	Ambulance drivers, attendants	43
51	Pressmen and plate printers	42
52	Compositors and typesetters	37
53	Medical secretaries	36
54	Barbers	36
55	Tool and die makers	34
56	Radio and TV repairmen	31
57	Dental assistants	30
58	Office machine repairmen	23
59	Photographers	18
60	Photoengravers, lithographers	18
61	Room/front desk clerks	17
62	Graphic artists	13
63	Animal caretakers (except farm)	10
64	Air traffic controllers	5

Table 3 lists the rankings of occupational titles in agribusiness and music industries by job openings for 1976 as estimated by agribusiness and music leaders. All estimates are for Nashville-Davidson County because there were no projected job openings available from the Interim Manpower Projections Program on the agribusiness and music occupational titles that could be included in the survey for review by respondents. Therefore, respondents were asked to give estimates of openings only for Nashville-Davidson County.

TABLE 3

RANKS OF AGRIBUSINESS AND MUSIC OCCUPATIONS BY JOB OPENINGS IN NASHVILLE-DAVIDSON COUNTY BY AGRIBUSINESS AND MUSIC LEADERS

Rank	Occupation	Job Openings 1976
1	Agribusiness Salespersons	188
2	Landscape and Greenhouse Operators/Assistants	92
3	Rock Band Musicians	88
4	Agribusiness Mechanics	44
5	Butchers	32
6	Music Secretaries	28
7	Other Agribusiness (except farming)	67
8	Other Entertainment and Related Occupations	43

Agribusiness job openings in descending order are salespersons (188), landscape and greenhouse operators/assistants (92), mechanics (44), butchers (32) and other agribusiness, except farming (67). Music job openings are rock band musicians (88), music secretaries (28), and other entertainment and related occupations (43).

Service Occupations

Service occupations and the average number of job openings for each in 1976 that were identified in the surveys are listed in Table 4 by occupational clusters. These occupations were listed in Table 1 and are presented here in clusters for emphasis. The largest cluster is the hospitality industry (924), followed by health services (593), human services (547), and other (784) for a total of 2,848 job openings in the service occupations cluster for 1976.

TABLE 4

OCCUPATIONAL TITLES AND AVERAGE ESTIMATED JOB OPENINGS FOR SERVICE OCCUPATIONS BY COMMUNITY LEADERS (n=92)

Rank	Occupations	Estimated Job Openings 1976
Health Services:		
1	Nurse Aides, Orderlies	229
2	Practical Nurses	178
3	Health Aides	77
4	Ambulance Driver/Attendant	43
5	Medical Secretaries	36
6	Dental Assistants	30
	Total	593
Hospitality Industry:		
1	Janitors and Sextons	293
2	Waiters, Waitresses	261
3	Cooks, Chefs	216
4	Housekeepers	73
5	Busboys, Dishwashers	64
6	Room/Front Desk Clerks	17
	Total	924

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Table 4 (continued)

Rank	Occupations	Estimated Job Openings 1976
Human Services:		
1	Institutional, Home Aides	344
2	Child Care Workers	105
3	Teacher Aides	49
4	Library Attendants, Assistants	49
	Total	547
Other Services:		
1	Cashiers	294
2	Cosmetologists	182
3	Recreation and Amusement Attendants	79
4	Building Maintenance Repairmen	71
5	Auto Service Station Attendants	60
6	Groundskeepers, Gardeners (except farm)	44
7	Barbers	36
8	Photographers	18
	Total	784
Total for Service Occupations		2,848

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Thirty-seven other occupational titles were written in by respondents of the surveys and are listed in the body of Chapter I. Further, Tables 5 through 21 provide analysis of the occupational titles by cluster.

CHAPTER I

EMPLOYMENT NEEDS IN GREATER NASHVILLE

Introduction

Identification of the employment needs of Greater Nashville was accomplished using three surveys designed to quantify the number of openings in semi-skilled and skilled level occupations. The largest survey in terms of the number of job titles and respondents was the general survey entitled "Nashville Area Employment Survey for 1976." This survey provided the total employment and number of job openings for 1976 for each of the highest demand occupations from the Interim Manpower Projections Program (IMP)[1] and requested community and business leaders to give their estimates of job openings for each of those occupations with which they were generally familiar.

A second survey was made of the agricultural businesses in Davidson County to identify the agribusiness occupations other than farming by job title and number of employment openings in 1976.

A third survey was made of occupations within Nashville's music industry to identify the number of job openings expected to occur in 1976 for jobs specific to the music industry.

A discussion of each survey follows.

---

[1] Interim Manpower Projections Program, SMSA of Nashville, Tennessee. Research and Statistics Section, Department of Employment Security, State of Tennessee in cooperation with the Bureau of Labor Statistics, U.S. Department of Labor, 1974.

Nashville Area Employment Survey for 1976

The original plan for the employment needs surveys was to identify existing, recently compiled employment demand data and review the data with community and business leaders to determine if there are any changes in the number of projected employment openings. This was necessary because (a) projections are usually calculated on data collected one or more years prior to making the projections and (b) employment for the past 12 to 18 months was generally on a downward trend (unemployment reaching 8.9% nationally in April of 1975, the highest rate of unemployment since 1941).

The latest data identified and most appropriate for this purpose was the Interim Manpower Projections Program, SMSA of Nashville, Tennessee. The Standard Metropolitan Statistical Area (SMSA) projections were generated in 1974 and identified many semi-skilled and skilled levels of employment. The area included in the SMSA and the data used are Davidson County and seven adjoining counties: Cheatham, Dickson, Robertson, Rutherford, Sumner, Wilson, and Williamson. In checking the background on the above data, it was determined that approximately 63% of the population of the eight county area resides in Davidson County. While no data were available to support it, area employment authorities believed that more than 63% of the total employment and job openings were in Davidson County.

A survey questionnaire was constructed titled "Nashville Area Employment Survey for 1976," which listed 57 semi-skilled

and skilled level occupations along with the total employment and total job openings projected for each occupation for 1976. Leaders surveyed were asked to give their estimates of 1976 job openings for each occupation for which they had a general familiarity of employment trends. Estimates of job openings were to include growth and replacement needs due to labor force separations.

Respondents to the survey were community leaders and business and industry leaders. Inputs to the development of the list of respondents were made by the Vocational Director and supervisors, and the Director of Schools. The list of organizations, businesses, and/or individuals from which survey data were requested are provided in Exhibit 1 of the Appendix. Also included in Exhibit 1 are a copy of the questionnaire used in the survey, interview guidelines, and related background data.

The questionnaire was completed on a personal interview basis by coordinators of cooperative education. Guidelines were developed for the interviews and a training session was held for the coordinators involving a demonstration interview. Ninety-five interviews were conducted, resulting in 92 completed questionnaires from community leaders and business and industry leaders.

In addition, each of the Metro vocational education teachers was mailed a copy of the questionnaire and requested to complete it. A total of 34 vocational teachers completed and returned questionnaires to the office of the Director of Vocational Education.

A detailed presentation of the responses of community leaders and vocational teachers is provided in Exhibit 2 of the Appendix, giving the average of the estimates, the percent of total employment represented by the average, the median (midpoint) estimate, the range in estimates, and the number of persons responding to each estimate. Further, the tables indicate the results of a statistical test of differences that was applied to each occupational grouping for responses of teachers and community business leaders. Estimates of each group, except teachers' estimates of human services and other, were significantly different from the Interim Manpower Projections Program estimates to the value of $p < .001$, meaning that these differences would not happen by chance more than one time in a thousand.

Tables 5 through 16 and Figures 2 through 9 present comparisons of the findings by occupational cluster. Included are an average of the job openings for 1976 estimates given by the community leaders (this includes business and industry leaders) and Metro vocational teachers. The Tables also present a comparison of these estimates with the annual job openings for 1976 to 1980 and the total employment for 1976 and 1980. This change from job openings for 1976 to annual openings for the period 1976-1980 was made to give a longer range view of the job openings consistent with the total employment data for 1976 and 1980. However, there were no differences in the job openings for 1976 and the annual openings for the 1976-1980 period except in a few cases where the number of jobs varied by one or two and was regarded as a result of computational rounding.

A longer range projection of national employment trends to 1985 is also presented in a series of figures depicting projections within each occupation. These data were published in the Occupational Outlook Handbook, 1974-1975 Edition and are in terms of percentage growth nationally; but can be helpful in considering the training needs over a longer period as it is critical to facility planning.

Health Services Occupations

Health services occupations ranked sixth among nine occupational groups in number of job openings. Table 5 indicates that the average estimates of job openings by community leaders and vocational teachers were higher than those of the Interim Manpower Projections (IMP) provided by the United States Department of Labor. Community leaders' estimates of job openings were ambulance driver/attendant (43), dental assistants (30), practical nurses (178), nurse aides/orderlies (229), and health aides (77). Vocational teachers gave slightly higher estimates for dental assistants (34), practical nurses (183), and health aides (93), and a lower estimate for nurse aides/orderlies (202). The percentage of 1976 employment represented by the annual openings is considered high and is due to the relative high mobility of workers to other jobs offering more pay and increased responsibility. However, there is growth in new jobs projected for the 1980 period as is reflected in the increase in total employment for 1980.

TABLE 5

HEALTH SERVICES OCCUPATIONS
EMPLOYMENT PROJECTIONS
FOR THE NASHVILLE SMSA

Occupations	Survey Results		U.S.D.L. Interim Manpower Projections			
	1976 Job Openings		Annual Openings			
	Community Leaders	Vocational Teachers	Average for 1976-1980	% of 1976 Employment	Employment 1976	Employment 1980
Ambulance drivers, attendants	43	22	--†	--	--	--
Dental Assistants	30	34	23	9.0	256	278
Practical Nurses	178	183	124	9.5	1,299	1,504
Nurse aides. Orderlies	229	202	181	7.4	2,462	2,672
Health Aides	77	93	63	9.5	665	777
SUBTOTAL	557	534	391	8.4	4,682	5,231
Other Occupations* (n=2)	--	--	-2	-2.4	84	40
TOTAL	557	534	389	6.0	4,766	5,271

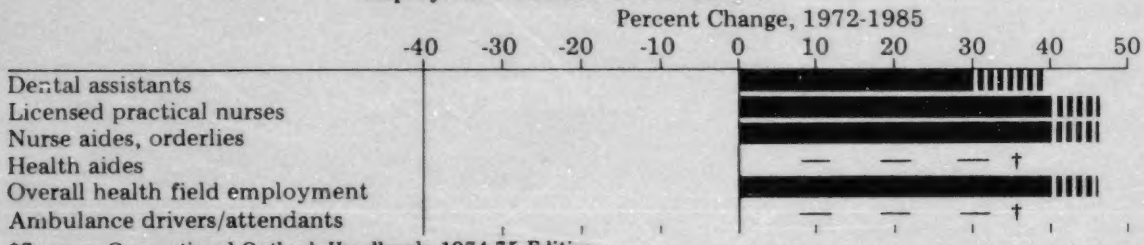
*not included in survey

†projection not available

It should be noted that two "other occupations" not included in the survey show a decrease in job openings and total employment as indicated by projections for 1976 employment (84) and the 1980 employment (40). The total health services employment should increase from 4,766 in 1976 to 5,271 in 1980.

Figure 2 indicates that very rapid growth (increase of 40% or more) is predicted from 1972 to 1985 for licensed practical nurses, nurse aides/orderlies, and the health field totally. The total health field projection is for health services occupations and the health professions. This growth for the period is equal to an annual growth of 3.08%. The occupation of dental assistant is projected to have a rapid increase (30% to 39.9%) over the 13 year period, which is a 2.3% to 3.1% annual growth rate. No projection of growth was given for health aide or ambulance driver/attendant occupations.

Figure 2. HEALTH SERVICES
Employment Outlook to mid-1980's*



*Source: Occupational Outlook Handbook, 1974-75 Edition.
†Projection not available.

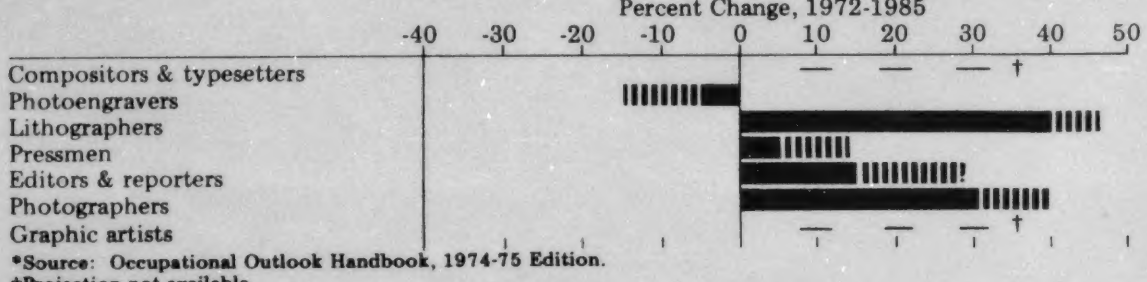
▮▮▮▮▮ Indicates the minimum to maximum range in percent of change.

Publishing/Printing Occupations

Publishing/printing occupations offered fewer job openings than any other of the nine occupational groups surveyed. Table 6 indicates that the total number of job openings estimated by community leaders (201), vocational teachers (219), and the estimate by IMP (173) show only a small difference (12) in total number. Estimates of job openings by community leaders and vocational teachers for the occupations were compositors and typesetters (37) and (32), photoengravers and lithographers (18) and (23), and editors and reporters (73) and (72), differing by a range of only one to five. Pressmen and plate printers were estimated to have (42) openings by the community leaders and (60) openings by the vocational teachers which were higher than the (36) openings projected by IMP. Estimates for graphic artists were (13) and (22) with photographers having estimates of (18) and (15). Total employment for the occupational grouping is expected to be (3,480) in 1976 and (3,795) in 1980, an increase in employment of 315 or .09%.

Figure 3 gives the projected percentage rate of growth for each of the occupations, except compositors and typesetters, for the 1972 to 1985 period. Photoengravers shows a slow decline of

Figure 3. PUBLISHING INDUSTRY
Employment Outlook to mid-1980's*



*Source: Occupational Outlook Handbook, 1974-75 Edition.
†Projection not available.
▮▮▮▮▮ Indicates the minimum to maximum range in percent of change.

TABLE 6

PUBLISHING/PRINTING OCCUPATIONS
EMPLOYMENT PROJECTIONS
FOR THE NASHVILLE SMSA

Occupations	Survey Results		U.S.D.L. Interim Manpower Projections			
	1976 Job Openings		Annual Openings			
	Community Leaders	Vocational Teachers	Average for 1976-1980	% of 1976 Employment	Employment 1976	Employment 1980
Compositors & Typesetters	37	32	29	3.6	801	831
Photoengravers, Lithographers	18	23	14	5.2	267	306
Pressmen & Plate Printers	42	60	36	3.9	920	1,001
Editors & Reporters	73	72	73	7.7	946	1,090
Graphic Artists	13	22	--†	--	--	--
Photographers	18	15	--†	--	--	--
SUBTOTAL	201	219	152	5.2	2,934	3,228
Other Occupations* (n=5)	--	--	21	3.8	546	567
TOTAL	201	219	173	5.0	3,480	3,795

*not included in survey
†projection not available

(-5.0%) to (-14.9%). Very rapid growth is projected for lithographers (40% or more) for an annual percentage of 3.08%, the highest rate of growth in the group. While this rate of growth is termed as very rapid, it is for a total employment of less than 300 as shown in Table 6. Thus, no large increase in number of jobs can be expected. Pressmen and plate printers show percentage increases of (5.0% to 14.9%) which is .38% to 1.15% annually, and newspaper editors and reporters (15.0% to 29.9%), which is 1.15% to 2.3% annually. In summary, some solid percentage increases are projected against a relatively small total employment.

Clerical Occupations

Clerical occupations shown in Table 7 ranked first out of nine occupational groups in average number of estimated job openings and total employment. The estimated job openings for the nine occupations were community leaders (2,808), vocational teachers (2,702), and IMP (2,499). Total employment projected by IMP for the nine occupations surveyed was (28,755) for 1976 and (32,237) for 1980. Estimates by community leaders were bank tellers (63), bookkeepers (415), cashiers (294), clerks (288), keypunch operators (91), medical secretaries (36), secretaries (1,120), typists (351) and receptionists (150). The estimates by community leaders were higher for each occupation than estimates by vocational teachers except for bookkeepers (433) and secretaries (1,199).

TABLE 7

CLERICAL OCCUPATIONS
EMPLOYMENT PROJECTIONS
FOR THE NASHVILLE SMSA

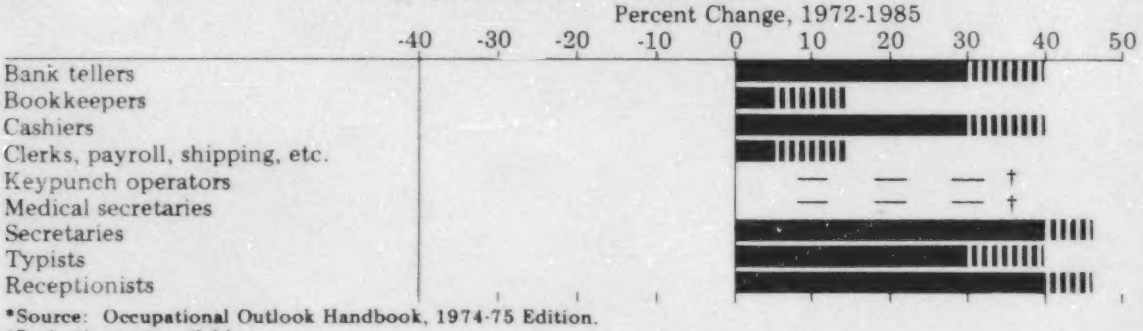
Occupations	Survey Results		U.S.D.L. Interim Manpower Projections			
	1976 Job Openings		Annual Openings			
	Community Leaders	Vocational Teachers	Average for 1976-1980	% of 1976 Employment	Employment 1976	Employment 1980
Bank Tellers	63	53	50	7.9	632	700
Bookkeepers	415	433	433	8.0	5,420	5,878
Cashiers	294	258	257	8.4	3,042	3,388
Clerks, payroll, shipping, etc.	288	245	229	7.0	3,700	4,030
Keypunch Operators	91	79	60	5.7	1,058	991
Medical Secretaries	36	--	22	9.7	226	256
Secretaries	1,120	1,199	1,049	9.7	10,849	12,277
Typists	351	306	289	9.7	2,979	3,282
Receptionists	150	131	110	8.5	1,289	1,385
SUBTOTAL	2,808	2,702	2,499	8.7	28,755	32,237
Other Occupations* (n=31)	--	--	1,095	6.8	16,505	17,994
TOTAL	2,808	2,702	3,594	7.9	45,260	50,181

*not included in survey

There are (31) "other occupations" not included in the survey because individually they had low manpower requirements but collectively have annual job openings of (1,095) projected annually by IMP for 1976 to 1980. These jobs would have many commonly required skills which together with the job openings for the nine occupations included in the survey offer the largest group of job openings of any cluster.

Trends to 1985 show continued promise for high demands for workers in clerical occupations as projected in Figure 4. Growth is indicated to be 30% or more for 1972-1985, 2.3% or more annually for the majority of the occupations. Bookkeepers and clerks have projected growth of 5.0% to 14.9%, which is .38% to 1.15% annually. No projections were given for keypunch operators and medical secretaries.

Figure 4. CLERICAL OCCUPATIONS
Employment Outlook to mid-1980's*



*Source: Occupational Outlook Handbook, 1974-75 Edition.
†Projection not available.

▮▮▮▮▮ Indicates the minimum to maximum range in percent of change.

Construction and Metalworking Craftsmen

The occupational grouping of construction and metalworking craftsmen ranked third in number of job openings (766) estimated by community leaders, with total employment of 12,672 projected for 1976 and 14,227 projected for 1980 for the eight occupations included in the survey (see Table 8). Both the community leaders' and vocational teachers' estimates of job openings ran above the IMP projection of openings. The community leaders' estimates of job openings in descending order are carpenters (168), plumbers and pipe fitters (116), electricians (98), welders (88), machinists (75), building maintenance repairmen (71), brickmasons and stonemasons (61), painters (55), and tool and die makers (34). The estimates of vocational teachers were generally close to estimates for community leaders except for plumbers and pipe fitters which teachers estimated lower (82) compared to community leaders (116).

Again, the number of "other occupations" not included in the survey was large (22) but collectively the job openings projected were only (81), indicating a relatively low level of openings per occupation in this segment of the occupational group.

Nationally, the trend is for continued growth in construction and metalworking craftsmen occupations for 1972-1985 as indicated in Figure 5. Rapid increase (30% to 39.9%) or 2.3% to 3.08% is projected for electricians and welders. Moderate increase (15% to 29.9%) or 1.15% to 2.3% annually is projected for brickmasons, carpenters, plumbers and pipe fitters, and machinists. Little to

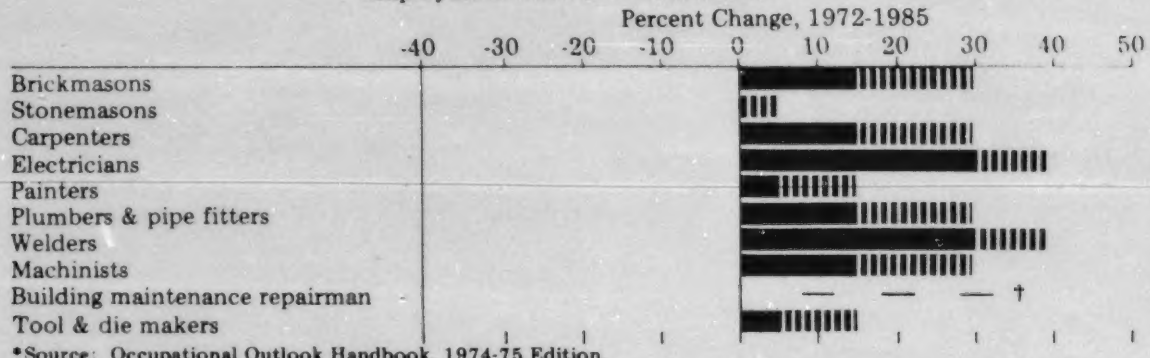
TABLE 8

CONSTRUCTION AND METALWORKING CRAFTSMEN
EMPLOYMENT PROJECTIONS
FOR THE NASHVILLE SMSA

Occupations	Survey Results		U.S.D.L. Interim Manpower Projections			
	1976 Job Openings		Annual Openings			
	Community Leaders	Vocational Teachers	Average for 1976-1980	% of 1976 Employment	Employment 1976	Employment 1980
Brickmasons & Stonemasons	61	75	44	4.4	989	1,107
Carpenters	168	169	132	5.4	2,443	2,694
Electricians	98	87	90	5.3	1,696	1,959
Painters	55	58	46	3.8	1,198	1,267
Plumbers & Pipe Fitters	116	82	81	5.6	1,452	1,665
Welders	88	99	81	5.1	1,576	1,819
Machinists	75	68	54	5.4	999	1,144
Building Maintenance Repairmen	71	74	--†	--	--	--
Tool & Die Makers	34	31	25	4.3	584	664
SUBTOTAL	766	743	553	5.1	10,937	12,319
Other Occupations* (n=22)	--	--	81	4.7	1,735	1,908
TOTAL	766	743	634	5.0	12,672	14,227

*not included in survey
†projection not available

Figure 5. CONSTRUCTION & METALWORKING CRAFTSMEN
Employment Outlook to mid-1980's*



*Source: Occupational Outlook Handbook, 1974-75 Edition.
†Projection not available.
▮▮▮▮▮ Indicates the minimum to maximum range in percent of change.

no increase in employment is expected for stonemasons. A slow increase (5% to 14.9%) or .38% to 1.15% is projected for painters and tool and die makers. Projections were not available for building maintenance repairmen. These national trends are generally consistent with estimates of job openings in Nashville area.

Mechanics, Repairmen, and Installers

This occupational group ranked fifth out of nine in the number of job openings estimated for 1976 by community leaders. Summary data in Table 9 indicate that the total average estimate of job openings by community leaders (684) was higher than vocational teachers (522) and substantially higher than IMP projections (365). Teachers' estimates were less than community leaders' estimates on all occupations except radio and TV repairmen (46 compared to 31) and auto service station attendant (65 compared to 60). The other average total estimates by community

TABLE 9

MECHANICS, REPAIRMEN, AND INSTALLERS
EMPLOYMENT PROJECTIONS
FOR THE NASHVILLE SMSA

Occupations	Survey Results		U.S.D.L. Interim Manpower Projections			
	1976 Job Openings		Annual Openings			
	Community Leaders	Vocational Teachers	Average for 1976-1980	% of 1976 Employment	Employment 1976	Employment 1980
Aircraft	58	39	36	6.9	518	646
Appliance	48	34	23	4.9	474	541
Auto	143	80	88	3.4	2,601	2,791
Auto Body Repair	50	23	4	1.7	231	240
Auto Service Station Attendant	60	65	51	3.8	1,335	1,444
Office Machine	23	7	4	3.3	121	134
Outdoor Vehicle & Equipment	54	48	--†	--	--	--
Diesel & Heavy Equipment	110	85	73	4.5	1,610	1,801
Refrigeration & Air Conditioning	57	53	37	6.9	539	661
Radio & TV Repairmen	31	46	15	3.2	476	515
Telephone Installers & Repairmen	50	42	34	3.5	975	1,087
SUBTOTAL	684	522	365	4.1	8,880	9,860
Other Occupations* (n=7)	--	--	43	4.6	938	1,040
TOTAL	684	522	408	4.2	9,818	10,900

*not included in survey

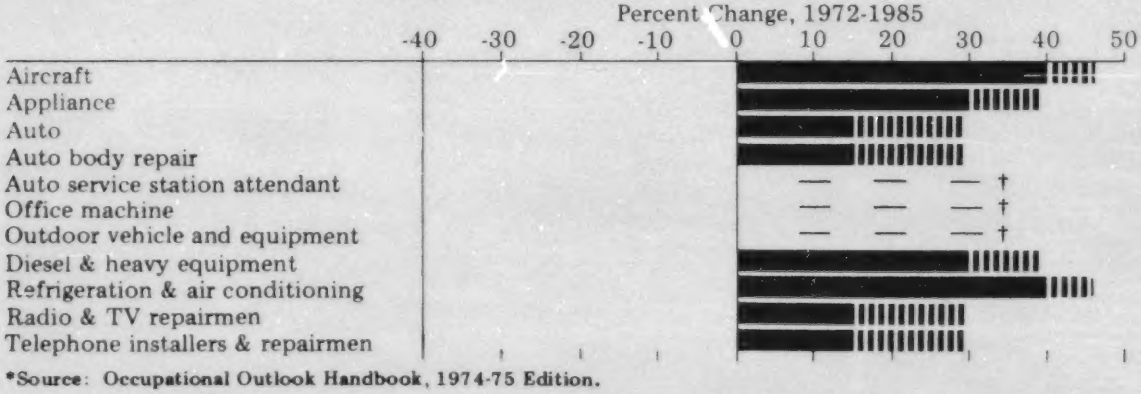
†projection not available

leaders were aircraft (58), appliance (48), auto (143), auto body repair (50), office machine (23), outdoor vehicle and equipment (54), diesel and heavy equipment (110), refrigeration and air conditioning (57), and telephone installers and repairmen (50).

"Other occupations" (7) not included in the survey had projections by IMP of only 43 job openings and a projected employment of 938 for 1976 and 1,040 for 1980. Total employment for mechanics, repairmen, and installers was projected by IMP as 9,818 for 1976 and 10,900 for 1980.

Nationally, the trend for growth in the mechanics, repairmen, and installers group is 15% to 40% or more according to the 1972-1985 projections indicated in Figure 6. The projected growth by occupation is aircraft (40% or more), appliance (30% to 39.9%), auto (15% to 29.9%), auto body repair (15% to 29.9%), diesel and heavy equipment (30% to 39.9%), refrigeration and air conditioning (40% or more), radio and TV repairmen (15% to 29.9%), and telephone installers and repairmen (15% to 29.9%). These ranges of

Figure 6. MECHANICS, REPAIRMEN & INSTALLERS
Employment Outlook to mid-1980's*



*Source: Occupational Outlook Handbook, 1974-75 Edition.
†Projection not available.
▮▮▮▮▮ Indicates the minimum to maximum range in percent of change.

growth equate to an annual growth range of 1.15% to 3.08% or more. Three occupations of this group not included in these national trends are auto service station attendants, office machine repairmen, and outdoor vehicle and equipment mechanics.

Hospitality Industry Occupations

Occupations in the hospitality industry as a group ranked second in terms of the number of job openings estimated by community leaders (1,050), (see Table 10). Average total estimated job openings by vocational teachers (944) were closer to the IMP projected job openings (825) than were community leaders' estimates.

Estimated job openings by community leaders and vocational teachers ranged well above 200 for 1976 for cooks/chefs (216 and 211), janitors and sextons (293 and 248), and waiters and waitresses (261 and 271). Other estimates of job openings by community leaders were busboys/dishwashers (64), housekeepers (73), meat cutters and wrappers (47), room/front desk clerks (17), and recreation and amusement attendants (79).

Three other food service occupations not included in the survey were shown by IMP to offer 113 job openings in 1976. Total employment projections for the seven occupations included in the survey and three other food service occupations were 13,017 for 1976 and 14,404 for 1980.

Nationally the growth trends for 1972-1985, as indicated in Figure 7, are for rapid increase in recreation and amusement attendants (30% to 39.9%), moderate increase (15% to 29.9%) for

TABLE 10

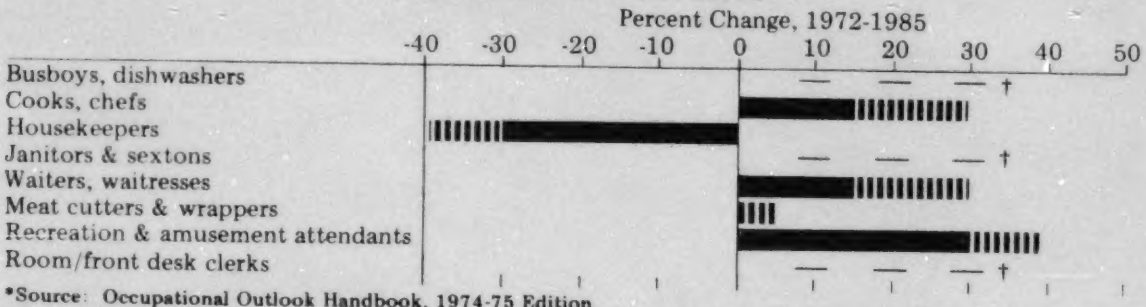
HOSPITALITY INDUSTRY OCCUPATIONS
EMPLOYMENT PROJECTIONS
FOR THE NASHVILLE SMSA

Occupations	Survey Results		U.S.D.L. Interim Manpower Projections			
	1976 Job Openings		Annual Openings			
	Community Leaders	Vocational Teachers	Average for 1976-1980	% of 1976 Employment	Employment 1976	Employment 1980
Busboys, Dishwashers	64	45	34	6.1	561	628
Cooks, Chefs	216	211	199	7.7	2,569	2,835
Housekeepers	73	61	55	7.6	719	769
Janitors & Sextons	293	248	245	6.9	3,530	3,926
Waiters, Waitresses	261	271	250	8.5	2,986	3,325
Meat Cutters & Wrappers	47	34	34	3.6	942	977
Recreation & Amusement Attendants	79	32	8	5.4	149	163
Room/Front Desk Clerks	17	42	--	--	--	--
SUBTOTAL	1,050	944	825	7.2	11,456	12,623
Other Food Service* (n=3)	--	--	113	7.2	1,561	1,781
TOTAL	1,050	944	938	7.2	13,017	14,404

*not included in survey

waiters/waitresses and cooks/chefs, little or no increase (0% to 4.9%) for meat cutters and wrappers, and rapid decline (-30% to -39.9%) for housekeepers. No projection was available for janitors and sextons, busboys/dishwashers, and room/front desk clerks.

Figure 7. HOSPITALITY INDUSTRY
Employment Outlook to mid-1980's*



*Source: Occupational Outlook Handbook, 1974-75 Edition.
†Projection not available.
▮▮▮▮▮ Indicates the minimum to maximum range in percent of change.

Human Services Occupations

Human services occupations ranked fourth in the number of estimated job openings (765 estimated by community leaders) for 1976 as shown in Table 11. Considering job openings for each occupation, the rank of each occupation within the group remained the same in both sets of estimates as with IMP projected job openings except for institutional/home aides. Community leaders' average estimates of job openings were barbers (36), cosmetologists (182), child care workers (105), institutional/home aides (344), library attendants/assistants (49), and teacher aides (49). Vocational teachers' average estimates were the same or near the same, except for cosmetologists which had 19 more estimated job openings and institutional/home aides which had 290 fewer estimated

TABLE 11

HUMAN SERVICES OCCUPATIONS
EMPLOYMENT PROJECTIONS
FOR THE NASHVILLE SMSA

Occupations	Survey Results		U.S.D.L. Interim Manpower Projections			
	1976 Job Openings		Annual Openings			
	Community Leaders	Vocational Teachers	Average for 1976-1980	% of 1976 Employment	Employment 1976	Employment 1980
Barbers	36	36	40	6.4	633	696
Cosmetologists	182	201	177	9.0	1,964	2,176
Child Care Workers	105	96	91	15.1	601	665
Institutional/Home Aides**	344	54	--	--	--	--
Library Attendants, Assistants	49	44	35	8.7	401	445
Teacher Aides	49	46	44	10.6	414	518
SUBTOTAL	765	477	387	9.6	4,013	4,500
Other Personal Service*(n=6)	--	--	28	4.9	568	562
TOTAL	765	477	415	9.1	4,581	5,062

*not included in survey

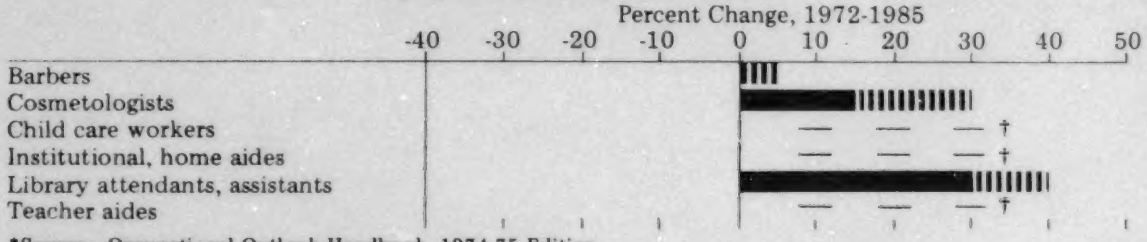
**Institutional, home aides (344 job openings), identified under other "Selected Occupations," is added to the total here and in summary of Chapter I for a total of 765 job openings in 1976 for this cluster.

job openings. The total estimated job openings given by vocational teachers was 477.

Other personal service occupations (6) not included in the survey provided only 28 job openings according to IMP projections for 1976. Thus the occupations included in the survey provide the majority of the jobs in this occupational grouping.

On the national level, growth for 1972-1985 is projected in Figure 8 to be rapidly increasing (30% to 39.9%) for cosmetologists and library attendants/assistants. Little or no change (0% to 4.9%) is projected for barbers. Projections were not available for teacher aides, child care workers, and institutional home aides.

Figure 8. HUMAN SERVICES
Employment Outlook to mid-1980's*



*Source: Occupational Outlook Handbook, 1974-75 Edition.
†Projection not available.

▮▮▮▮▮ Indicates the minimum to maximum range in percent of change.

Other Occupations

Ten occupations which did not fall within one of the above occupational groups are treated here. Table 12 indicates that the total average estimates of job openings were 1,474 for community leaders and 1,349 for vocational teachers. Estimates by community leaders were slightly higher than projections by IMP for all

TABLE 12

OTHER OCCUPATIONS
EMPLOYMENT PROJECTIONS
FOR THE NASHVILLE SMSA

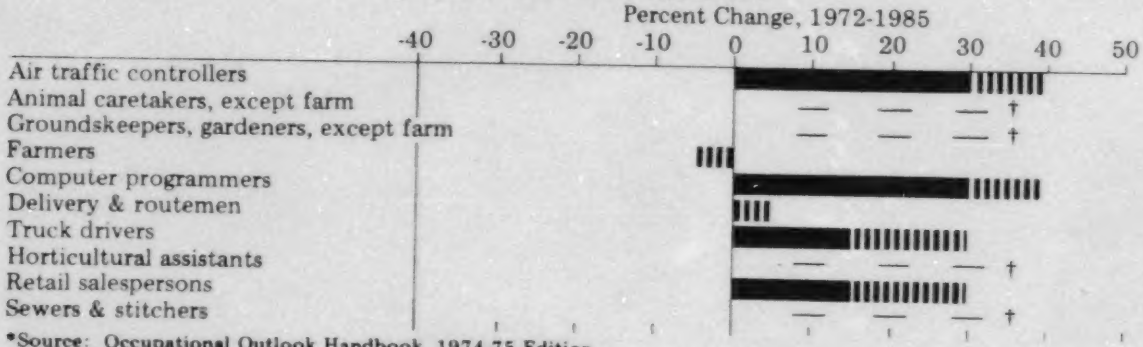
Occupations	Survey Results		U.S.D.L. Interim Manpower Projections			
	1976 Job Openings		Annual Openings			
	Community Leaders	Vocational Teachers	Average for 1976-1980	% of 1976 Employment	Employment 1976	Employment 1980
Air Traffic Controllers	5	3	1	2.2	46	53
Animal Caretakers, except farm (a)	10	6	4	3.4	117	125
Groundskeepers, gardeners, except farm	44	27	27	4.0	682	667
Farmers (a)	43	32	28	2.2	1,257	1,057
Computer programmers (c)	44	37	28	5.5	505	565
Delivery & Routemen	122	104	93	4.3	2,163	2,402
Truck Drivers	208	192	185	3.4	5,384	5,810
Horticultural Assistants	46	33	--	--	--	--
Retail Salespersons (b)	680	680	744	8.0	9,300	10,463
Sewers and Stitchers	272	235	237	7.9	2,997	3,297
TOTAL	1,474	1,349	1,347	6.0	22,451	24,439

In the summary section of Chapter I: (a) will be included under agribusiness cluster; (b) will be included under sales cluster; and (c) will be included under the applied physical science professional cluster.

occupations except retail salespersons which was lower by 680 to 744. Community leaders' estimates for the remaining occupations were sewers and stitchers (272), truck drivers (208), computer programmers (44), horticultural assistants (46), groundskeepers/ gardeners, except farm (44), farmers (43), photographers (18), animal caretakers, except farm (10), and air traffic controllers (5). Total employment was projected to be 22,451 for 1976 and 24,439 for 1980.

Figure 9 gives the varied projection for these occupations nationally. Rapid increase (30% to 39.9%) in growth was predicted for air traffic controllers, computer programmers and photographers, which is an annual growth of 2.3% to 3.08%. Moderate increase (15% to 29.9%) in growth was projected for retail salespersons and truck drivers. None to little growth (0% to 4.9%) was projected for delivery and routemen and none to little decline (0% to -4.9%) indicated for farmers. Projected trends were not available for sewers and stitchers, groundskeepers, and animal caretakers.

Figure 9. OTHER
Employment Outlook to mid-1980's*



*Source: Occupational Outlook Handbook, 1974-75 Edition.
†Projection not available.

▮▮▮▮▮ Indicates the minimum to maximum range in percent of change.

Write-In Occupations

All respondents were invited to "write-in" other occupational titles and estimates of job openings for 1976. Vocational teachers wrote in eight occupational titles which are given in Table 13. All except heavy freight handler (no estimate), recording equipment operators (25), and machine tool operators (50) were written in by community leaders. It should be noted that draftsman was noted here by two teachers with estimates of 125 and 50.

Thirty-five job titles and estimates of job openings were written in by community leaders (see Table 14) with only two job titles being listed two times: sheetmetal workers (25 and 75 estimated job openings) and aircraft line service personnel (75 and 100 estimated job openings). The occupation of draftsman was listed three times with estimates of 25, 100, and 150. The remaining 32 occupations are listed with estimates in occupational clusters.

TABLE 13

"WRITE-IN" OCCUPATIONAL NEEDS
IDENTIFIED BY VOCATIONAL TEACHERS

Occupations	Job Openings* 1976
Computer operator	--
Recording equipment operator	25
Draftsman	125, 50
Commercial artist	30
Heavy freight handler	--
Aircraft lineman	15
Sheetmetal worker	50
Machine tool operator	50

*These are estimates as provided by each individual. Each estimate given is entered below without any averaging or other analysis.

TABLE 14

"WRITE-IN" OCCUPATIONAL NEEDS
IDENTIFIED BY COMMUNITY LEADERS

Occupations	Job Openings* 1976
Health Services	
Medical laboratory technicians	40
Dental laboratory technicians	10
Dental equipment repairmen	10
Medical equipment repairmen	10
Registered nurse	200
Respiratory therapist	40
Clerical Occupations	
Word processing typists	no estimate
Telephone operators	250
Construction & Metalworking	
Draftsmen	25, 150, 100
Iron workers	50
Tile setters	30
Construction labor workers	1,500
Construction helpers	1,500
Sheetmetal workers	25, 75
Weatherproofing repairmen	50
Asbestos workers	30
Glazers	10
Operating engineers (crane)	75
Mechanics, Repairmen, Installers	
Aircraft electronic and instrument technicians	20
Aircraft line service personnel	75, 100
Avionic installer and technicians	15
Automobile electrical specialists	45

TABLE 14 (continued)

Occupations	Job Openings* 1976
Human Services	
Instructional aides	no estimate
Other	
Communications technicians	25
Communication industry	400
Song writers	500
Music management	20
Computer operators	75
Wholesale salespersons	40
Grocery clerks, sack boys	90
Mold makers (plastics)	125
Horticulture	
Floral arrangers and designers	10
Garden supply center workers	50
Greenskeepers, golf course attendants	20
Farm equipment repairmen	25

*These are estimates as provided by each individual. Each estimate given is entered below without any averaging or other analysis.

Agricultural Occupations Other Than Farming in Davidson County

Upon reviewing the data available from the Interim Manpower Projections Program with the vocational education supervisors, the lack of data on employment demands for agribusiness occupations was recognized. Teachers of vocational agriculture requested help to design and conduct an occupational needs survey among the agricultural businesses of Davidson County.

A list of agricultural businesses was compiled from the yellow pages of the Greater Nashville Telephone Directory, published in April 1974, and categorized into business groupings and subgroupings as follows:

Horticulture

- Retail florist
- Wholesale florist
- Greenhouses
- Garden centers
- Plant nurseries
- Landscape contractors
- Tree service companies
- Golf courses
- Lawn and garden centers

Farm Supplies

Veterinary Medicine

Natural Resources

Forestry

Farm Machinery

Food Processing, Meats

- Packing companies
- Wholesalers
- Specialty companies

Food Processing, Excluding Meats

- Dairy products
- Food products
- Food service management
- Dairies

Livestock Feed Dealers

Fertilizer Processors

A survey questionnaire titled "Agricultural Occupations Other Than Farming in Davidson County" was designed (a copy of the questionnaire is in Exhibit 3) and teachers of vocational agriculture were trained to survey the business firms on a personal interview basis.

A random sample of 85 businesses were selected from the subgroupings. Businesses were interviewed from each of the groupings and subgroupings except natural resources, livestock feed dealers, and forestry. Responses were obtained from only 44 businesses within the sample, therefore the data are not conclusive but do provide a rough projection of occupational trends and needs.

Table 15 provides a summary of the survey findings by agricultural groupings and occupational titles within the groupings. Listed are both full-time and part-time employment for 1975 and 1976 and job openings for 1976. The number of part-time jobs offers excellent opportunities for students to gain work experience during their training. These jobs can be scheduled after school, on weekends, during holiday periods, and in the summer.

Within horticulture, the occupations of landscapers (12), landscape attendants (64), greenhouse attendants (15), and greenskeepers (1), are a cluster which has a common core of curriculum requirements. This cluster accounts for 92 job openings for 1976. Further, the job title of salesperson offers 93 job openings annually in the field of horticulture. The cumulative number of job openings in all agribusinesses for salespersons is 188. The demands for agribusiness mechanics identified in the survey numbers 44 annually, with 32 of these listed as farm machinery mechanics. The job openings for butchers were 32 and all other job openings totalled 67.

Table 16 gives a summary of the agricultural and non-agricultural employment in the agribusiness group. The number of

TABLE 15

AGRICULTURAL OCCUPATIONS EXCLUDING FARMING
GREATER NASHVILLE AREA

Occupations	Employment 1975		Employment 1976		Job Openings** 1976	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
HORTICULTURE (24)*						
Landscapers	97	1,307	106	1,307	12	42
Landscape attendants	327	185	380	221	64	42
Greenhouse attendants	459	9	459	35	15	26
Salespersons	388	71	468	150	93	81
Florists (designers,assistants)	80	17	88	26	11	9
Tree service workers	97	177	97	177	3	6
Greenskeepers	44	0	44	0	1	0
Mechanics	35	17	44	9	10	7
Other	97	17	97	44	3	28
TOTAL	1,624	1,800	1,783	1,969	211	227
FARM SUPPLIES (4)*						
Salespersons	74	11	88	17	16	6
Truck drivers	14	0	19	0	6	0
TOTAL	88	11	107	17	22	6
FARM MACHINERY (1)*						
Mechanics	144	27	171	18	32	-9
Salespersons	63	0	63	0	2	0
TOTAL	207	27	234	18	34	-9
VETERINARY MEDICINE (4)*						
Small animal caretaker	31	13	31	13	1	0

TABLE 15 (continued)

Occupations	Employment 1975		Employment 1976		Job Openings** 1976	
	Full Time	Part Time	Full Time	Part Time	Full Time	Part Time
Veterinary Assistants	50	13	50	13	2	0
TOTAL	81	26	81	26	3	0
FOOD PROCESSING: MEATS (5)*						
Salespersons	49	0	49	0	2	0
Butcher	133	14	161	14	32	0
Cutter	14	7	14	7	0	0
Slaughter workers	2,100	245	2,100	245	67	8
Livestock buyer	42	0	49	0	8	0
Truck driver	182	0	182	0	6	0
Other	91	7	14	7	-74	0
TOTAL	2,611	273	2,569	273	41	8
FOOD PROCESSING: EXCLUDING MEAT (8)*						
Salespersons	394	0	426	0	45	0
Driver/salespersons	384	0	403	0	31	0
Graders	23	0	23	0	1	0
Machine operators	278	19	278	19	9	1
Mechanics	46	0	46	0	2	0
Other	148	0	167	0	24	0
TOTAL	1,273	19	1,343	19	112	1
TOTAL AGRICULTURE EXCLUDING FARMING	5,884	2,156	6,117	2,322	423	233

* Values in parentheses in the number of businesses responding to the survey.

** Job Openings includes growth from 1975 to 1976 and replacement needs. Replacement needs were calculated as 3.2% (the average for the State of Tennessee for deaths, retirement, taking a different kind of job, etc.) of the 1975 employment for each occupation.

TABLE 16

AGRICULTURAL AND NON-AGRICULTURAL
EMPLOYMENT IN THE AGRIBUSINESS GROUP (1)

Occupations	n (2)	Full-Time Agricultural Employment		Full-Time Job Openings	Full-Time Agricultural Non-Agricultural Employment
		1975	1976	1976	1975
Horticulture	212	1,624	1,783	211	2,419
Farm Machinery	9	207	234	34	252
Food Processing: Meat	35	2,611	2,569	41	3,710
Food Processing: Excluding Meat	37	1,273	1,343	112	2,426
Farm Supplies	11	88	107	22	313
Veterinary Medicine	25	81	81	3	144
TOTAL	329	5,884	6,117	423	9,264

(1) Business Listing compiled from yellow pages of Greater Nashville telephone directory, April 1974.

(2) Column designated as n gives the number of agricultural businesses within each industry grouping.

businesses is 329 with horticulture having the largest number, 212. Total full-time agricultural employment is estimated to be 5,884 for 1975 and 6,117 for 1976. The total number of agricultural job openings is projected to be 423. Total employment in 1975 including non-agricultural employment is 9,264.

Summary of Agribusiness

Total job openings in agribusiness occupations identified in the surveys are summarized in Table 17 titled Agribusiness Job Openings.

TABLE 17

AGRIBUSINESS JOB OPENINGS
ESTIMATED BY COMMUNITY LEADERS AND
AGRICULTURAL LEADERS

Occupation	Job Openings 1976
Agricultural mechanics	44
Animal caretakers, except farm*	10
Butchers	32
Farmers*	43
Landscape and greenhouse operators/assistants	88
Other agribusiness, except farming	67
TOTAL	284

*Estimates of animal caretakers and farmers are for eight county SMSA. All others are for Nashville-Davidson County.

Agribusiness salespersons (188) are summarized under sales occupations cluster.

Survey of Music and Allied Occupations

Since music in Nashville is a giant industry known worldwide and existing manpower data contained little information on music employment needs, a survey was made of employment openings by job title.

Twenty-five leaders of the music industry were identified to participate in the survey by Mrs. W. M. (Tex) (Dorothy) Ritter, Director of Entertainment Industry Relations, Department of Economic and Community Development, State of Tennessee. The 25 leaders included recording artists, recording executives, publishers, composers, television executives, association leaders, and others.

A meeting was held at the Country Music Hall of Fame and Museum with 12 of the 25 leaders and other interested persons to discuss the employment openings in music and allied fields. Discussion centered around fields of recording, radio and television, publishing, filming, and live musical performances. Initially some of the music leaders felt that most positions required a high level of sensitivity to and talent in music and that instruction at the high school level could contribute very little except to prepare students to write and spell accurately. It was obvious that some felt that there were opportunities for vocational education involvement, though they had not given it much consideration. The meeting concluded with the group being given a questionnaire titled "Survey of Music and Allied Occupations" to complete and return by mail. The questionnaire requested respondents to give job titles, brief descriptions of duties, and number of openings

per job title in 1976 for semi-skilled and skilled level employment in the music fields. Only two people responded to the questionnaire. Interviews were conducted with six of the group to complete additional questionnaires and probe further as to vocational education needs of the music industry. A list of the 25 music leaders and a copy of the two questionnaires used in the surveys are in Exhibit 4.

The results of the meeting with the group, the questionnaires, and interviews were summarized into a second questionnaire titled "Summary of Job Titles and Estimated Annual Employment Openings for Nashville's Music Industry." The questionnaire contained each job title and an average estimate of job openings. It was mailed to the 25 leaders with the request for them to: (1) indicate their agreement or disagreement with a revised estimate of job openings for each job title for 1976, and (2) list any other semi-skilled and skilled level job titles and estimated job openings for 1976. Questionnaires were completed and returned by 11 leaders.

Table 18 focuses on "Entertainment and Related Fields" and provides a summary of the results from the second questionnaire including the job titles and job openings expressed as an average of estimates, median (midpoint) estimate, range of estimates, and number of leaders providing estimates for each job title.

The four highest demand occupations and average number of job openings were rock band road musicians (88), music secretaries (28), song writers (262), and record press operators (22). Comments on the questionnaire and in interviews indicate that the job of record

TABLE 18

ENTERTAINMENT AND RELATED FIELDS
ESTIMATES OF JOB OPENINGS OF NASHVILLE'S
MUSIC INDUSTRY FOR 1976*
(n=11)

	Occupations	Summary of Responses			
		Average	Median	Range	No. of Leaders
1.	Record press operators	22	30	5-30	8
2.	Rock band road musicians	88	100	15-150	6
3.	Song writers	262	250	0-500	9
4.	Managers for artists	12	7.5	2-20	8
5.	Music secretaries	28	30	10-40	9
6.	Recording studio technicians	5	5	0-10	9
7.	Song pluggers	13	10	0-50	9
8.	TV prop persons	7	5	3-15	8
9.	TV camera operators	9	10	5-10	5
10.	Sound equipment repairmen	9	10	3-15	5
	TOTAL	455			

50

press operator requires a minimum of one week on-the-job training and that song writers seldom earn a livelihood from simply writing songs. Estimates of openings for song writers covered a wide range from 0 to 500. Opinions generally were that the occupations of song writer and manager for artists (12) are not appropriate for high school instructional programs.

Jobs identified in the survey with a relatively low number of openings were recording studio technicians (5), song pluggers (13), TV prop persons (7), TV camera operators (9), and sound equipment repairmen (9). These 43 job openings are referred to in the summary as other entertainment and related occupations. Individual respondents wrote in job titles and openings of bus driver/mechanic (5), lighting engineer (3), and musical instrument repairman (2).

Other job titles that were mentioned in the survey for which no estimates were given were electronic repairmen, graphic artists, printers, instrumental musicians and/or singers, salespersons, clerks, electronic engineers (mixers), and public relations persons.

Mrs. Alice Kousser, a respondent in the study, reported that there are interests and support for developing programs and laboratories in the form of mobile units to serve music and the communication arts fields. The mobile units could be equipped to provide orientation and introductions to such areas as photography (including dark rooms), audio and video training console boards, projection equipment, and other areas of the music and communication arts fields. Mrs. Kousser stated that a trucking company had indicated a willingness to contribute one or more trucks for this

purpose and that persons at WLAC-TV had volunteered to help design such mobile units for Metro Public Schools.

It should be recognized that music in Nashville is a giant business. Over 95% of the nation's country music recording is done in the city, according to one of the music leaders. Plans for new educational facilities and programs should give consideration to needs of the music industry.

Professional and Technical Employment Needs Data Consistent with Student, Parent, and School Personnel

Occupations and clusters of occupations represented in the surveys among students, parents, and school personnel included professional and technical levels of employment. To permit a summary of job openings by clusters related to interests of students and parents and curricular coverage ratings by school personnel, it was necessary to provide data on job openings for professional and technical levels of employment. Job openings as quantified in the Interim Manpower Projections Program were used for this purpose for each occupation in the clusters referred to above. These occupational titles and number of job openings have been clustered on the same basis as in Chapter III, which focuses on student and parent interests surveys, and in Chapter IV, which focuses on the opinion survey of selected school personnel.

The professional and technical level occupational titles are clustered under the following designations: (1) sales occupations, (2) physical sciences professionals, (3) applied physical

sciences professionals, (4) human services professionals, and (5) medical professionals. A summary of these clusters and projected total average job openings, employment for 1976 and employment for 1980 are presented in Table 19.

Individual occupational titles and job openings for each cluster are shown in Exhibit 2, Tables F through J. The titles of retail salespersons (680 job openings) and computer programmers (44 job openings) from survey of community leaders are included in sales cluster and applied physical science professionals cluster, respectively.

Another means of projecting the employment trends by industry grouping to 1990, using a simulation technique, is presented in Exhibit 2, Table E. These data are by industry and include professional and managerial levels of employment. As a result, the data cannot be compared directly with the Interim Manpower Projections Program's occupations or clusters data. However, this data provides a prospective for projections up to 1990 for total employment and should not be confused with the semi-skilled and skilled level data on which the Nashville Surveys were focused.

TABLE 19

PROFESSIONAL AND TECHNICAL CLUSTERS
AND PROJECTED JOB OPENINGS*

	Cluster	Annual Job Openings 1976-1980	Employ-ment 1976	Employ-ment 1980
1.	Sales occupations	1,211	19,323	21,771
2.	Physical science professionals	19	493	550
3.	Applied physical science professionals	199	3,612	4,128
4.	Human services professionals	1,047	15,994	17,622
5.	Medical professionals	398	5,801	6,328

*Compiled from Interim Manpower Projection Program data.

SUMMARY

CHAPTER II

ENTRANCE REQUIREMENTS FOR HIGHEST DEMAND OCCUPATIONS

A major aspect of the survey of job openings for the 57 highest demand occupations was the identification of requirements for entry level employment in each of the occupations. The requirements selected to be studied assumed that persons would be properly trained and, therefore, assessed the requirements of employees being bondable, obtaining a health certificate and license, completing an apprenticeship and a written examination, being of the minimum age, and having the minimum education. The responses included are from both community leaders and vocational teachers.

The majority of the occupations required persons to be 18 years of age and complete 12 years of education. More exceptions occurred with education than age. These exceptions were in some occupations in the hospitality cluster where only eight years education are required for busboys, dishwashers, cooks, chefs, housekeepers, janitors and sextons, and waiters/waitresses. Human service occupations requiring less than 12 years education were barbers (8), cosmetologists (10), and child care workers (10). Sewers and stitchers also required only eight years of education.

The occupations that tended to require a range of 12-14 years were editors and reporters, meat cutters and wrappers, air traffic controllers, and computer programmers.

A few requirements applying to all occupations in the cluster are health certificates for health services, apprenticeship for construction and metalworking craftsmen, and some types of apprenticeship or prior training for mechanics, repairmen and installers. Requirements for each individual occupation are presented in Table 20 and explained in the discussion focusing on each cluster.

CHAPTER II

ENTRANCE REQUIREMENTS FOR HIGHEST DEMAND OCCUPATIONS

Keeping abreast of the entrance requirements of semi-skilled and skilled level occupations is important to the operation of on-going programs and a critical factor to consider when selecting and initiating new vocational education programs. The primary purpose served by information on entry requirements is to assure that students completing the required vocational education program will be able to gain employment without confronting requirements which cannot be met.

This study has identified entrance requirements of 57 of the highest demand occupations in the Nashville SMSA, as perceived by Nashville area community leaders, leaders from business and industry, and vocational teachers. The factors identified and assessed which the school may address through the vocational education programs are (a) license for entering the occupation, (b) qualifying written exams, (c) apprenticeship programs, and (d) minimum education level. Other entry requirements for selected occupations which should be known by the planning authorities of Metro Schools and the counselors and students are the occupations which require new employees (a) to be bonded, (b) to obtain a health certificate, and (c) to be a specific minimum age.

The responses to entry requirements for the highest demand occupations included in the survey are summarized in Table 20.

TABLE 20

ENTRANCE REQUIREMENTS FOR EMPLOYMENT IN SELECTED OCCUPATIONS AS REPORTED BY COMMUNITY LEADERS AND VOCATIONAL TEACHERS*

		Bondable	Health Certificate	License	Apprenticeship	Written Exam	Median Age	Median Years Education
I	HEALTH SERVICES							
	Dental Assistants (10)*	O	M	S	S	S	18	12
	Practical Nurses (10)	O	M	M	O	M	18	12
	Nurse Aides, Orderlies (7)	O	M	O	S	S	18	12
	Health Aides (8)	O	M	S	O	O	18	12
II	PUBLISHING INDUSTRY							
	Compositors & Typesetters (5)	O	O	O	M	O	18	12
	Photoengravers & Lithographers (6)	O	O	O	M	O	18	12
	Pressmen & Plate Printers (7)	O	O	O	M	O	18	12
	Editors & Reporters (2)	S	O	O	S	S	18	12-14
III	CLERICAL OCCUPATIONS							
	Bank Tellers (11)	M	O	O	S	M	18	12
	Bookkeepers (11)	S	O	S	S	S	18	12
	Cashiers (7)	M	O	O	O	O	18	12
	Clerks, Payroll, Shipping (6)	S	O	O	O	O	18	12
	Keypunch Operators (10)	O	O	O	O	S	18	12
	Medical Secretaries (6)	S	S	O	S	S	18	12
	Secretaries (16)	S	O	O	S	M	18	12
	Typists (16)	S	O	O	S	M	18	12
	Receptionists (8)	O	O	O	S	S	18	12
IV	CONSTRUCTION & METALWORKING CRAFTSMEN							
	Brickmasons & Stone Masons (11)	O	O	O	M	O	18	12
	Carpenters (17)	O	O	S	M	O	18	10-12
	Electricians (17)	O	O	S	M	O	18	12
	Painters (10)	O	O	O	M	O	18	12
	Plumbers & Pipe Fitters (13)	O	O	S	M	S	18	12
	Welders (12)	O	O	O	M	O	18	12
	Machinists (10)	O	O	O	M	O	18	12
	Tool & Die Makers (11)	O	O	S	M	O	18	12

TABLE 20 (continued)

		Bondable	Health Certificate	License	Apprenticeship	Written Exam	Median Age	Median Years Education
V	MECHANICS, REPAIRMEN & INSTALLERS							
	Aircraft (5)	O	O	S	M	S	18	12
	Appliance (4)	O	O	O	M	O	18	12
	Auto (8)	S	O	O	M	O	18	12
	Auto Body Repair (7)	O	O	O	M	O	18	12
	Auto Service Station Attendants (4)	S	O	O	S	O	18	12
	Office Machine (7)	S	O	S	S	S	18	12
	Diesel & Heavy Equipment (4)	O	O	O	M	O	18	12
	Refrigeration & Air Conditioning(10)	O	O	O	M	S	18	12
	Radio & TV Repairmen (5)	O	O	O	M	O	18	12
	Telephone Installers & Repairmen (4)	O	O	O	S	O	18	12
VI	HOSPITALITY INDUSTRY							
	Busboys, Dishwashers (5)	O	M	O	O	O	18	8
	Cooks, Chefs (5)	O	M	O	O	O	18	8
	Housekeepers (1)	S	O	O	O	O	18	8
	Janitors & Sextons (2)	S	S	O	O	O	18	8
	Waiters & Waitresses (5)	O	M	O	O	O	18	8
	Meat Cutters & Wrappers (5)	O	M	S	S	S	18	14
	Recreation & Amusement Attendants(1)	S	S	O	M	S	18	12
VII	HUMAN SERVICES							
	Barbers (5)	O	M	M	S	M	18	8
	Cosmetologists (6)	S	M	M	S	M	18	10
	Child Care Workers (3)	O	M	O	O	O	18	10
	Library Attendant, Assistants (2)	O	O	O	O	M	18	12
	Teacher Aides (11)	O	S	O	M	O	18	12

TABLE 20 (continued)

VIII OTHERS	Bondable	Health Certificate	License	Apprenticeship	Written Exam	Median Age	Median Years Education
Air Traffic Controllers (4)	O	O	M	S	M	18	12-14
Animal Caretakers (3)	O	M	S	S	M	18	12
Groundskeepers & Gardeners (2)	S	O	S	S	S	18	12
Farmers (1)	O	O	S	O	O	18	12
Computer Programmers (6)	O	O	O	S	M	18	12-14
Delivery & Routemen (4)	M	O	M	O	O	18	12
Truck Drivers (3)	S	O	M	O	S	18	12
Photographers (2)	O	O	M	O	S	18	12
Retail Salespersons (5)	M	O	O	O	O	16-18	12
Sewers & Stitchers (1)	O	O	O	S	O	18	8

KEY

M = Most of the time required
O = Seldom or never required
S = Sometimes required

*Value in parentheses represents total number of individuals responding to the entrance requirements for each occupation.

The summarization provides the majority opinion as to the frequency that each of the entrance requirements are applicable to each occupation. This frequency is shown by the following symbols:

M = most of the time required

S = sometimes required

0 = seldom or never required

The entry requirements for each occupational grouping are discussed below and include both the findings of the survey and significant variations with national entrance requirements as defined in the Occupational Outlook Handbook, 1974-75 Edition.

Health Services

It was generally felt that a minimum age of 18 years and a twelfth grade education were requirements for entering these occupations. All four of the occupations were indicated as requiring a health certificate most of the time. (Medical institutions always seem to require health certificates, license, and written exams for these occupations.) A written exam and supervised training, described as a limited form of apprenticeship experiences, are sometimes required for dental assistants, and nurse aides/orderlies.

Publishing Industry

Considerable similarity exists with the entry requirements of production occupations of compositors and typesetters, photoengravers and lithographers, and pressmen and plate printers. In most cases, these appear to be apprenticeable occupations with a

minimum age of 18 years and minimum education of 12 years. Persons entering editor and reporter occupations are sometimes required to be bonded, serve an apprenticeship, take a written exam, and have completed 12 to 14 years of education.

Clerical Occupations

All the occupations listed in this group tend to require a minimum of 18 years of age and 12 years of education. Being bondable is required most of the time for bank tellers and cashiers and sometimes required for bookkeepers, clerks, medical secretaries, secretaries, and typists. Sometimes a health certificate is required for medical secretaries and license for bookkeepers.

Some training and experience seems desirable for many of the clerical occupations as all but three occupations indicate that apprenticeship is sometimes required for entry. This is interpreted to be a combination of learning and work experience which is expected and/or required by some of the employers. Secretaries, typists, and bank tellers are required to take written exams most of the time. Sometimes written exams are required for bookkeepers, keypunch operators, medical secretaries, and receptionists.

Construction and Metalworking Craftsmen

Few entry requirements were found relative to craftsmen in construction and metalworking occupations needing health certificates or bonds. However, most of the time it seems that apprenticeship training is required for each of the eight occupations and that licenses are sometimes required for carpenters,

electricians, plumbers and pipe fitters, and tool and die makers. (The level of apprenticeship requirements reported here is believed to be higher than exist in the community as about 50% of the survey respondents to this group of occupations were union officials and more than 50% of the jobs in the greater Nashville area appear to be non-union.)

Consistent with most occupations, age and education requirements seem to pivot around a person being 18 years of age and having completed 12 years of schooling, even though responses suggested that some carpenters are hired with 10 years of schooling.

Mechanics, Repairmen and Installers

Generally, it appears that mechanics, repairmen, and installers in the occupations surveyed require that employees be 18 years of age, have completed 12 years of education, and completed apprenticeship training most of the time. However, it should be noted that apprenticeship requirement is only "sometimes" for auto service station attendants, office machine repairmen, and telephone installers and repairmen. Other entry requirements that occur sometimes are written exams for aircraft mechanics, office machine repairmen, and refrigeration and air conditioning mechanics; licenses for office machine repairmen, and bonding for auto service station attendants and office machine repairmen. Health certificates are seldom or never required for entry into these occupations.

Exceptions to these requirements which exist nationally, according to the Occupational Outlook Handbook, 1974-75 Edition, are that aircraft mechanics need to be 20 years of age and most of the time are required to obtain a health certificate, license, and take a written exam. Persons concerned with occupational mobility for aircraft mechanics should be aware of these exceptions. Additionally, it should be noted that some employers only require 10 years of education for the auto service station attendant.

Hospitality Industry

The jobs in the hospitality industry that are associated with food services, including busboys, dishwashers, cooks, chefs, waiters and waitresses, and meat cutters and wrappers, require health certificates most of the time. Furthermore, meat cutters and wrappers sometimes are required to obtain a license, complete apprenticeship training, and take written exams.

Other hospitality industry workers, including janitors and sextons, and recreation and amusement attendants, are sometimes required to obtain health certificates. Bonding is sometimes required of housekeepers, janitors and sextons, and recreation and amusement attendants. Furthermore, recreation and amusement attendants are required to complete apprenticeship training most of the time and take a written exam sometimes.

Occupations in this industry were generally reported to have an age requirement of 18 years with only eight years of education

required for each. Exceptions were for meat cutters and wrappers which require 14 years of education, and recreation and amusement attendants which require 12 years of education.

Human Services

Barbers and cosmetologists lead this occupational group in the number of requirements. Most of the time each requires that employees be licensed, obtain a health certificate, and pass a written exam. Sometimes each requires that employees complete apprenticeship-type programs and cosmetologists are sometimes required to obtain a bond. State law requires barbers and cosmetologists to obtain a license involving a written exam.

Most of the time, child care workers are required to have a health certificate; library attendants/assistants are required to complete a written exam; and teacher aides are required to complete some training and experience labeled as apprenticeship. Further, teacher aides are sometimes required to obtain a health certificate.

The median age of 18 years was indicated for all human service workers. The median years of education was eight for barbers, 10 for cosmetologists and child care workers, and 12 for library attendants/assistants, and teacher aides.

Nationally, the minimum age of cosmetologists is 16 and both barbers and cosmetologists are required to complete apprenticeship training, according to the Occupational Outlook Handbook, 1974-75 Edition.

Other Occupations

The 10 occupations in this group have a variety of entry requirements but some commonality is evident in age and education requirements. The median age of 18 is required for all the occupations except retail salespersons which may begin in some instances at age 16. Median years of education is 12 for most occupations, with the exception of air traffic controllers and computer programmers which require 12 to 14 years, and sewers and stitchers which require eight years of education.

Air traffic controllers require a license and written exam most of the time and apprenticeship training sometimes.

Animal caretakers require a health certificate and written exam most of the time and a license and apprenticeship training sometimes.

Groundkeepers and gardeners are indicated as sometimes requiring that workers be bondable, licensed, complete an apprenticeship, and pass a written exam. Farmers in certain specialties are sometimes required to obtain a license (e.g., dairy).

Most of the time computer programmers are required to take a written exam and are sometimes required to complete an apprenticeship.

Delivery and routemen are required most of the time to be bondable and licensed. Truck drivers are also required to obtain a license most of the time and are sometimes required to be bondable and pass a written exam.

Photographers are required most of the time to obtain a license and sometimes required to pass a written exam.

The primary entrance requirement for retail salespersons is that they be bondable most of the time.

Sewers and stitchers are sometimes required to complete training and work experience which is labeled as apprenticeship training.

Any other information reeds on entrance requirements for these occupations or other occupations may be obtained from members of the business community, the vocational education advisory committee, and/or the Occupational Outlook Handbook, 1974-75 Edition.

SUMMARY

CHAPTER III

STUDENT AND PARENT SURVEY FINDINGS

The dichotomy that always persists in planning programs of vocational education is to select occupational offerings that meet student interests and labor market demands. Therefore, it was most important that this survey be made to assess the occupational interests of students and the occupational expectations that parents hold for their children. Both dimensions are of critical importance since parents are the most influential sources of information on their children's occupational choice. This factor of parental influence on student occupational choice was further substantiated in the surveys by the high degree of similarity between student interest and parent expectations, as well as student and parent agreement on short-term and long-term occupational goals and occupational features.

Ranking of Occupational Clusters Based Upon Student Survey

Since high correspondence was found between student and parent occupational preferences in the surveys, this section will summarize the relation of various occupational clusters to one another based upon student interests. A detailed breakdown of each of these occupational clusters by job title will follow.

The 14 occupational clusters, developed around the occupational titles in the questionnaire, contained from four to 12 job titles. Each job title has a rank from one to 99 based upon student choices. Table 21 reports the average of the ranks of occupations in each cluster. These averages were used to rank the clusters, with one indicating the highest rank and 14 indicating the lowest rank.

By a sizable margin, the entertainment and related occupational cluster achieved the highest rank followed by clerical occupations, human services professions, publishing industry occupations, medical professions and health services. Clusters ranked seven through 12 were rather closely grouped in terms of average rank of occupations within the clusters. These clusters are: mechanics, repairmen, and installers (7), agribusiness (8), human services (9), construction and metalworking (10), applied physical science professionals (11), and the hospitality industry (12). The two lowest ranking occupational clusters were sales occupations (13), and physical science professionals (14).

Caution should be observed when making judgments about the relative importance of these occupational clusters based upon the average rank of occupations within the clusters. In several instances high interest occupations may be mixed with a number of low interest occupations, therefore causing the average ranking of the cluster to poorly represent the high interest occupations.

TABLE 21

SUMMARY RANKING OF OCCUPATIONAL CLUSTERS BASED UPON AVERAGE RANKS OF OCCUPATIONS WITHIN CLUSTERS, BY STUDENTS (n=4,232)

Occupational Cluster	Average Rank of Occupations	Rank of Cluster
Entertainment and Related	17.4	1 (highest)
Clerical	29.9	2
Human Services Professional	30.2	3
Publishing Industry	33.6	4
Medical Professions	35.5	5
Health Services	45.6	6
Mechanics, Repairmen, and Installers	55.5	7
Agribusiness	56.2	8
Human Services	57.0	9
Construction and Metalworking	58.5	10
Applied Physical Science Professional	58.7	11
Hospitality Industry	62.0	12
Sales Occupations	75.5	13
Physical Science Professional	78.8	14 (lowest)

Rankings of Occupational Titles by Job Openings

Table 22 contains occupational rankings based upon the student survey. Item 99 in the questionnaire's list of occupations, "Other," attained the highest ranking.[1] These miscellaneous choices were written in on the questionnaires and are analyzed in detail later in this chapter. In nearly all cases, the write-ins were related to at least one of the 98 occupations on the questionnaire. Highest ranking occupations based on student interests were secretary/stenographer, musician/singer, professional athelete, teacher/teacher aide, nurse, auto mechanic, social worker, child care worker, and airline steward/stewardess.

Lowest ranking occupations were building materials and hardware salesperson, agribusiness salesperson, meat cutter and wrapper, library attendent/assistant, meteorologist, physicist, dietician/dietician technician, painter of buildings, barber and geologist. The reader may find it interesting to study the total table in some detail.

Other Findings

The high degree of similarity between student occupational interests and parent occupational expectations for their children led to the conclusion that results from the student survey would be an accurate indicator of parent views. This finding was

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[1]This should not be too surprising when one considers that the U.S. Department of Labor has identified over 23,000 job titles, far too many to include in a questionnaire.

TABLE 22

RANKED OCCUPATIONAL INTERESTS OF 11TH GRADERS
BASED ON CUMULATIVE SCORES
(n=4,232)

Rank	Occupation	Cumulative Score*
1.0	Other	1,340
2.0	Secretary, stenographer	903
3.0	Musician, singer	836
4.0	Athlete, professional	749
5.0	Teacher, teacher aide	732
6.0	Nurse	714
7.0	Mechanic, auto	701
8.0	Social worker	679
9.0	Child care worker	658
10.0	Airline steward, stewardess	572
11.0	Truck driver	530
12.0	Artist, commercial or graphic	522
13.0	Architect	518
14.0	Police officer	496
15.0	Computer programmer, technician	485
16.0	Model	478
17.0	Lawyer	463
18.0	Photographer	443
19.0	Airline pilot, copilot	433
20.0	Forester	424
21.0	Receptionist	412
22.0	Physician, surgeon	386
23.0	Keypunch operator	364
24.0	Veterinarian	359
25.0	Psychologist	355
26.0	Radio and TV announcer	351
27.0	Recording and film technician, specialist	346
28.0	Accountant	335
29.0	Salesperson, fashion merchandising	311
30.0	Electrician	304
31.0	Accounting clerk, bookkeeper	287
32.0	Beauty operator, cosmetologist	274
33.5	Auto body repairman	273
33.5	Draftsman	273
35.0	Animal caretaker, trainer	259
36.0	Carpenter	248
37.0	Farmer	222
38.0	Actor, actress	215
39.0	Dental hygienist, assistant	213
40.0	Journalist	211

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TABLE 22 (continued)

Rank	Occupation	Cumulative Score*
41.5	Welder	204
41.5	Cashier	204
43.0	Medical secretary	197
44.0	Engineer, electrical	196
45.0	Dentist	188
46.0	Engineer, mechanical	179
47.5	Therapist	175
47.5	Office clerk	175
49.0	Bricklayer, mason	170
50.0	Medical technologist	168
51.0	Pharmacist	165
52.0	School counselor	163
53.0	Home economist	154
54.0	Laboratory technician	150
55.0	Mechanic, air craft	139
56.0	Salesperson, insurance, investments, and real estate	138
57.0	Mechanic, diesel and heavy equipment	134
58.0	Biologist	128
59.0	Mechanic, small engine	127
60.0	Machinist	121
61.0	Telephone installer, repairman	117
62.0	Cook, chef	116
63.0	Food waiter, waitress	115
64.0	Radio and TV serviceman	114
65.0	Ecologist	112
66.0	Broadcasting technician, specialist	111
67.0	Astronomer	110
68.0	Chemist	108
69.0	Landscaper	102
70.0	Engineer, civil	96
71.0	Printer, pressman	88
72.0	Salesperson, automotive, recreational, and industrial	80
73.5	Engineer, industrial	79
73.5	Engineering technician	79
75.5	Tool and die maker	76
75.5	Florist	76
77.5	Landscape attendant	73
77.5	Auto service station attendant	73
79.0	Occupational therapist	71
80.0	Mechanic, refrigeration and air conditioning	69
81.0	Clergy	68
82.0	Hotel or motel desk clerk	64

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TABLE 22 (continued)

Rank	Occupation	Cumulative Score*
83.0	Plumber	63
84.0	Greenhouse operator, nurseryman	61
85.0	Engineer, chemical	59
86.0	Salesperson, food merchandising	57
87.0	Engineer, agricultural	56
88.5	Soil conservationist	42
88.5	Salesperson, home furnishings and housewares	42
90.0	Geologist	41
91.5	Barber	40
91.5	Painter, buildings	40
93.0	Dietician, dietician technician	37
94.0	Physicist	36
95.5	Meteorologist	35
95.5	Library attendant, assistant	35
97.0	Meat cutter and wrapper	22
98.0	Salesperson, agribusiness	14
99.0	Salesperson, building materials and hardware	13

*Cumulative score is based upon the following weights for each student choosing a given occupation: 1st Choice = 3 points; 2nd Choice = 2 points; and 3rd Choice = 1 point.

supported by a high rate of agreement (81%) between students and parents on the short-term and long-term goals of various occupations.

In addition, student and parent preferences for occupational features were similar. Features preferred by students were high pay, working with people, challenge and excitement, and chance for advancement. Features preferred for students by their parents were security, working with people, high pay, challenge and excitement, and chance for advancement.

CHAPTER III

STUDENT AND PARENT SURVEY FINDINGS

Occupational interests of students and the occupational expectations parents hold for their children have long been bases for the planning of effective vocational education programs. Manpower demand needs of society, important as they are, cannot serve as the sole determiner of vocational curricula. Ideally, vocational education program planning should focus upon areas of high manpower demand and strong student and parent interest. In the absence of such conditions, however, modern educational philosophy supports the offering of vocational curricula which are intrinsically interesting and motivating to students.

The Occupational Outlook Handbook, 1974-75 Edition, (1974, p. 7) offers the following encouragement to students with specific career interests in areas where job openings may be relatively limited:

> The prospect of relatively few job openings should not prevent someone from pursuing a particular career. A student who knows his own interests and has discussed his abilities and aptitudes with his counselor should not forego a potentially rewarding career only because the prospective outlook in that occupation is less favorable than in other occupations. Even in occupations with relatively poor prospects, jobs are available because of the need to replace workers who leave the occupations; on the average, job openings resulting from replacement of workers who leave the occupation account for more than half of all openings.

How the Student and Parent Surveys were Conducted

Numerous reports of occupational interest surveys among students and parents, conducted throughout the United States, were reviewed for their relevance to the Nashville Metropolitan Schools surveys. Although a number of valuable ideas were obtained from this review of studies, none of the questionnaires used in those studies covered the range of questions to be answered in the Metro Schools survey.

A preliminary questionnaire was designed by the research staff. With the assistance of Metro Schools' Research and Evaluation Department, arrangements were made to pilot test the questionnaire with all tenth grade students enrolled at Goodlettsville High School and their parents. During the pilot test, 146 tenth graders completed the questionnaire and were given an almost identical questionnaire to take home overnight for completion by their parents. The following day, tenth graders returned 63, or 43%, completed parent questionnaires.

Based upon this pilot test among students and parents, a number of revisions were made in the list of occupations, questionnaire instructions, and answer sheet format, in preparation for the large-scale survey of eleventh graders and their parents in each of the 18 Metro high schools.

On February 28, Dr. Elbert D. Brooks, Director of Schools, sent a memorandum to all secondary principals in the Metro Schools asking that the counselor chairman from each school attend an orientation meeting for the survey on Monday, March 10. Subsequently,

Mrs. Dorothy Pease, Supervisor of Guidance, sent a memo to senior high counselor chairman to provide details of the orientation meeting and to ask for their cooperation in conducting the survey in each of the schools. Exhibit 5 contains these memoranda, questionnaires, and answer sheets used in the survey of students and parents.

The survey of eleventh graders was scheduled for Wednesday, March 12, in each of the high schools. Unfortunately, school attendance throughout the city that day was markedly down due to catastrophic flooding throughout the Davidson County area. This flood, reported to be perhaps the worst in Nashville's history, caused high absenteeism of students and school personnel on the day of the survey. Absences were so high in some schools that many eleventh graders were surveyed on the following day instead.

Each student surveyed was asked to take a similar questionnaire home to her or his parents for completion and return to the school by the student. Of the approximately 5,000 eleventh graders in the Metro Schools, 4,232, or 73%, completed the survey. No doubt this percentage would have been much higher had the flooding not occurred. Similarly, of the 4,232 students completing the study, 1,757, or 41.5%, of the parents forms were completed and returned to the schools. It is likely that the flooding affected the completion of the survey more adversely for parents than for students since the flooding of homes and millions of dollars worth of property damage were occurring throughout the period of the survey.

A follow-up questionnaire was mailed to 200 of the non-responding parents to determine whether or not their responses showed the same trend as the 1,757 parents who responded to the survey originally. Even though a pre-addressed, postpaid envelope was provided parents for returning the follow-up questionnaire and answer sheet, only 42 parents (21%) returned the completed forms. Another seven envelopes (3.5%) were returned marked "Addressee Unknown" or "No Forwarding Address."

Questionnaire Completions in Each School

Table 23 on the following page shows the number of students and the number and percentage of parents completing the questionnaire in each of Metro's 18 high schools. Although most schools had approximately 200 eleventh graders complete the questionnaire, the range was from 85 at Joelton High School to 657 at McGavock High School.

The numbers of parents completing the questionnaire were rather inconsistent across schools, in proportion to the number of students who completed the questionnaire and took a similar one home for their parents to complete. The highest return rate from parents was at Antioch High School (70.9%) followed by Cohn (58.6%), Madison High School (55.0%), DuPont (54.0%), Hillwood High School (52.2%), and Hume-Fogg High School (50.2%). Lowest parent return rates were from Pearl High School (14.3%), North High School (19.6%), Maplewood High School (21.8%), McGavock High School (24.8%), and Bellevue High School (29.4%).

TABLE 23

NUMBER OF STUDENTS AND NUMBER AND PERCENTAGE OF PARENTS COMPLETING QUESTIONNAIRE, BY SCHOOL

	High School	Questionnaire Completions		
		Students	Parents	
		No.	No.	%
1.	Antioch	285	202	70.9
2.	Bellevue	180	53	29.4
3.	Cohn	191	112	58.6
4.	DuPont	252	136	54.0
5.	East	230	89	38.7
6.	Glencliff	189	79	41.8
7.	Goodlettsville	155	70	45.2
8.	Hillsboro	275	117	42.6
9.	Hillwood	163	85	52.2
10.	Hume-Fogg	227	114	50.2
11.	Joelton	85	39	45.9
12.	Madison	271	149	55.0
13.	Maplewood	284	62	21.8
14.	McGavock	657	163	24.8
15.	North	148	29	19.6
16.	Overton	331	151	45.6
17.	Pearl	91	13	14.3
18.	Stratford	218	94	43.1
	Totals	4,232	1,757	41.5

Computing Choice Rankings of Occupations

Student and parent occupational choices were expressed in terms of first, second, and third choices. To give consideration to all levels of choices, it was necessary to develop cumulative scores for each occupation which was done by assigning weights to choices as follows:

First choice = 3
Second choice= 2
Third choice = 1

The number of first, second, and third choice responses for each occupation was multiplied by the weight assigned as indicated below.

(first choice x 3) + (second choice x 2) +
(third choice x 1) = cumulative score

EXAMPLE: The occupation of accountant was ranked first choice by 77 students, second choice by 40 students, and third choice by 24 students. Thus,

Cumulative score = (77 x 3) + (40 x 2) + (24 x 1)

Cumulative score = 231 + 80 + 24

Cumulative score = 335

Ranks of occupational choices are made by arraying cumulative scores from the highest to lowest scores. This method of ranking occupations takes into account fully the number of students choosing a given occupation and their levels of preference for the occupation. Exhibit 6 provides the total listing of occupational choices of eleventh graders and parents, and the rank for the occupations based on cumulative scores.

Student and Parent Occupational Choices

A comparison of the 99 occupational ranks based upon students choices with the 99 occupational ranks based upon their parents expectations indicated that student and parent choices for occupations were very similar.[1] This finding is consistent with many other studies which have reported the high degree of influence of parents opinions upon their children's occupational preferences. Additional support for this finding is provided in tables in Exhibit 7, showing occupational preferences by sex of students, and preferences of parents of females and parents of male students. Among female students and the parents of female students, a high degree of similarity exists among the top ranking occupations. Female students and their parents generally prefer the traditional female occupations of secretary, nurse, teacher, airline stewardess, and receptionist.

Similarly, male students and their parents preferred the traditionally male occupations of architect, professional athlete, mechanic, truck driver, airline pilot, and doctor.

Therefore, based upon the high similarity between student and parent occupational preferences, the ranking of occupations and occupational groups within this chapter will be based upon student ratings. Important differences between students and parents in a limited number of occupations will be pointed out where they occur

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[1] A correlation was computed (r_s) and it was found to be .87, significant beyond the .01 level. This means this high correlation could have occurred by chance less than one time in 100.

in the tables. The 99 occupational choices available to students in the questionnaire were grouped to correspond with the occupational categories in Chapter I on Employment Needs in Greater Nashville. Several additional categories were added in this chapter on Student and Parent Survey Findings to include occupations not listed in the manpower demand categories, with most of those occupations fitting within professional categories.

Health Services Occupational Cluster

Among the five occupations in the health services occupational cluster, by far the most popular occupation was that of nurse (see Table 24). This occupation ranks sixth of 99 among students and first among parents. As Exhibit 7 shows, the predominant interest in this occupation was for female students. Although parents viewed this occupational cluster more favorably than did students, there is a reasonably close correspondence between occupational rankings from students and parents.

Publishing Industry Occupational Cluster

As Table 25 shows, the occupation of greatest interest to students and parents within the publishing industry occupational cluster was that of commercial or graphic artist. However, it is important to note that commercial or graphic artists work in a number of occupational settings other than in publishing. Although students and parents differ by several ranks on the occupations of journalist, photographer, and recording and film technician/

TABLE 24

STUDENT AND PARENT INTERESTS IN THE
HEALTH SERVICES OCCUPATIONAL CLUSTER,
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232)		Parents (n=1,757)	
		Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1.	Dental hygienist, assistant	213	39.0	193	15.0
2.	Laboratory technician	150	54.0	105	34.0
3.	Medical technologist	168	50.0	92	40.5
4.	Nurse	714	6.0	468	1.0
5.	Occupational Therapist	71	79.0	36	66.0
	Totals	1,316	228.0	894	156.5
	Averages	263.2	45.6	178.8	31.3

TABLE 25

STUDENT AND PARENT INTERESTS IN THE
PUBLISHING INDUSTRY OCCUPATIONAL CLUSTER,
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232)		Parents (n=1,757)	
		Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1.	Artist, commercial or graphic	522	12.0	287	6.0
2.	Journalist	211	40.0	155	21.0
3.	Photographer	443	18.0	96	39.0
4.	Printer, pressman	88	71.0	35	67.0
5.	Recording and film technician, specialist	346	27.0	89	42.0
	Totals	1,610	168.0	662	175.0
	Averages	322.0	33.6	132.4	35.0

specialist, the differences are less dramatic when the ranks are considered across 99 possible positions. The lowest ranking occupation in the cluster, printer/pressman, was viewed almost identically by students and parents.

Clerical Occupational Cluster

Student and parent rankings of occupations within the clerical cluster are shown in Table 26. By noticeable margin, the highest ranking occupation was that of secretary/stenographer, ranking second in both the student and parent surveys. The next most popular occupation was receptionist, followed by keypunch operator and accounting clerk/bookkeeper. The remaining clerical occupations were for the most part in the top half of the 99 occupational choices.

Construction and Metalworking Occupational Cluster

Table 27 indicates that most of the occupations within the construction and metalworking cluster rank within the middle one-third of the rankings from both student and parent data. None of the occupations in this cluster ranked in the top thirty. The occupations of draftsmen, carpenter, welder, bricklayer/mason, and machinist were of moderate interest to both students and parents. However, a relatively low interest to both groups were painter of buildings, plumber and engineering technician. The overall interest in occupations of construction and metalworking must be considered substantial.

TABLE 26

STUDENT AND PARENT INTERESTS IN THE
CLERICAL OCCUPATIONAL CLUSTER
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232)		Parents (n=1,757)	
		Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1.	Accounting clerk, bookkeeper	287	31.0	189	16.0
2.	Cashier	204	41.5	53	54.0
3.	Keypunch operator	364	23.0	177	19.0
4.	Medical secretary	197	43.0	143	24.0
5.	Office clerk	175	47.5	92	40.5
6.	Receptionist	412	21.0	198	14.0
7.	Secretary, stenographer	903	2.0	456	2.0
	Totals	2,542	209.0	1,308	169.5
	Averages	363.1	29.9	186.8	24.2

TABLE 27

STUDENT AND PARENT INTERESTS IN THE CONSTRUCTION AND METALWORKING OCCUPATIONAL CLUSTER BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232)		Parents (n=1,757)	
		Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1.	Bricklayer, mason	170	49.0	34	68.0
2.	Carpenter	248	36.0	51	56.0
3.	Draftsmen	273	33.5	99	38.0
4.	Engineering technician	79	73.5	30	71.0
5.	Machinist	121	60.0	40	63.5
6.	Painter, buildings	40	91.5	12	93.0
7.	Plumber	63	83.0	28	74.0
8.	Welder	204	41.5	46	59.0
	Totals	1,198	468.0	340	522.5
	Averages	149.8	58.5	42.5	65.3

Mechanics, Repairmen and Installers Occupational Cluster

Among the twelve occupations within the mechanics, repairmen and installers occupational cluster, that of auto mechanic was the most popular to both students and parents (see Table 28). None of the other occupations in this cluster ranked higher than thirtieth. However, moderately strong interest was expressed in the occupations of electrician, auto body repair, aircraft mechanics, diesel and heavy equipment mechanics, and radio and TV service. The lowest ranking occupations within this cluster were auto service station attendant, refrigeration and air conditioning mechanic, and tool and die maker.

Hospitality Industry Occupational Cluster

Table 29 shows the ranking of occupations within the hospitality industry occupational cluster. The only high ranking occupation within this cluster was that of airline steward/stewardess with rankings from both student and parent surveys being almost identical. Of moderate interest to students were the occupations of cook/chef and food waiter/waitress, but parents viewed these the occupations of dietician/dietician technician and hotel or motel desk clerk in a very favorable light.

Human Services Occupational Cluster

Table 30 indicates that the occupation of child care worker is the most popular occupation in the human services cluster. Also, both students and parents indicated a relatively high interest in beauty operator/cosmetologist as an occupation. On the

TABLE 28

STUDENT AND PARENT INTERESTS IN THE MECHANICS, REPAIRMEN, AND INSTALLERS OCCUPATIONAL CLUSTER BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232) Cumulative Score	Students (n=4,232) Rank in 99	Parents (n=1,757) Cumulative Score	Parents (n=1,757) Rank in 99
1.	Auto body repairman	273	33.5	43	60.5
2.	Auto service station attendant	73	77.5	10	94.0
3.	Broadcasting technician specialist	111	66.0	43	60.5
4.	Electrician	304	30.0	87	43.0
5.	Mechanic, air craft	139	55.0	50	57.5
6.	Mechanic, auto	701	7.0	154	22.0
7.	Mechanic, diesel and heavy equipment	134	57.0	24	81.5
8.	Mechanic, refrigeration and air conditioning	69	80.0	27	75.5
9.	Mechanic, small engine	127	59.0	24	81.5
10.	Radio and TV serviceman	114	64.0	32	69.0
11.	Telephone installer, repairman	117	61.0	41	62.0
12.	Tool and die maker	76	75.5	21	84.0
	Totals	2,238	665.5	556	791.0
	Averages	186.5	55.5	46.3	65.9

TABLE 29

STUDENT AND PARENT INTERESTS IN THE
HOSPITALITY INDUSTRY OCCUPATIONAL CLUSTER
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232)		Parents (n=1,757)	
		Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1.	Airline steward, stewardess	572	10.0	207	13.0
2.	Cook, chef	116	62.0	22	83.0
3.	Dietician, dietician technician	37	93.0	29	72.5
4.	Food waiter, waitress	115	63.0	26	78.0
5.	Hotel or motel desk clerk	64	82.0	9	95.0
	Totals	904	310.0	293	341.5
	Averages	180.8	62.0	58.6	68.3

TABLE 30

STUDENT AND PARENT INTERESTS IN THE
HUMAN SERVICES OCCUPATIONAL CLUSTER
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232)		Parents (n=1,757)	
		Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1.	Barber	40	91.5	4	98.5
2.	Beauty operator, cosmetologist	274	32.0	148	23.0
3.	Child care worker	658	9.0	181	18.0
4.	Library attendant, assistant	35	95.5	37	65.0
	Totals	1,007	228.0	370	204.5
	Averages	251.8	57.0	92.5	51.1

other hand, both students and parents indicated relatively little interest in the occupation of barber. The greatest distance of opinion between students and parents was regarding the occupation library attendant/assistant, which was ranked 65th in the parent survey but 95th in the student survey.

Agribusiness Occupational Cluster

Student and parent interests and the occupations in the agribusiness cluster are shown in Table 31. Both students and parents indicated a relatively high interest in the occupation of forester. The next most popular occupation within this cluster was that of animal caretaker/trainer. Interestingly, the occupation of farmer ranked 37th among students, but 78th among parents. This relatively high interest in farming among predominately urban students was somewhat surprising. The four occupations which could be considered in the horticulture field received relatively low rankings from both students and parents. However, the least interesting occupation was that of meat cutter/wrapper.

Sales Occupational Cluster

Table 32 indicates student and parent interests in the sales occupational cluster. By a considerable margin, the most popular sales occupation to both students and parents was that of fashion merchandising. Moderately high interest was shown by both students and parents in insurance, investments and real estate sales. The five remaining sales occupations received relatively low rankings

TABLE 31

STUDENT AND PARENT INTERESTS IN THE AGRIBUSINESS OCCUPATIONAL CLUSTER BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232) Cumulative Score	Students (n=4,232) Rank in 99	Parents (n=1,757) Cumulative Score	Parents (n=1,757) Rank in 99
1.	Animal caretaker, trainer	259	35.0	65	48.0
2.	Farmer	222	37.0	26	78.0
3.	Florist	76	75.5	29	72.5
4.	Forester	424	20.0	116	30.0
5.	Greenhouse operator, nurseryman	61	84.0	14	91.0
6.	Landscaper	102	69.0	17	87.0
7.	Landscape attendant	73	77.5	26	78.0
8.	Meat cutter and wrapper	22	97.0	4	98.5
	Totals	1,239	495.0	297	583.0
	Averages	154.9	61.9	37.1	72.9

TABLE 32

STUDENT AND PARENT INTERESTS IN THE
SALES OCCUPATIONAL CLUSTER
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232)		Parents (n=1,757)	
		Cumulative Score	Rank of 99	Cumulative Score	Rank of 99
1.	Salesperson, agribusiness	14	98.0	5	97.0
2.	Salesperson, automotive, recreational and industrial	80	72.0	16	88.5
3.	Salesperson, building materials and hardware	13	99.0	6	96.0
4.	Salesperson, fashion merchandising	311	29.0	100	36.5
5.	Salesperson, food merchandising	57	86.0	18	86.0
6.	Salesperson, home furnishings and housewares	42	88.5	13	92.0
7.	Salesperson, insurance, investments & real estate	138	56.0	64	49.0
	Totals	655	528.5	222	545.0
	Averages	93.6	75.5	31.7	77.9

in both the student and parent surveys. A note of caution may be in order in viewing the relatively low interest in specific sales occupations. With seven sales occupations listed as options on the questionnaire, student and parent interests in sales generally were scattered across the seven occupational options. However, if the questionnaire had only listed the occupational title "salesperson" there is little doubt that this title would have received a higher ranking than any of the seven appearing in Table 32.

Entertainment and Related Occupational Cluster

Table 33 shows that the occupation musician/singer was ranked very high by both students and parents. Also, musician/singer was one of the few occupations with a high rank that was popular among both males and females. The next most popular occupation in this cluster was professional athlete, predominately interesting to males. The remaining three occupations, model, radio and TV announcer, and actress/actor, were of high to moderately high interest to both students and parents. The high interest of both students and parents in the entertainment and related occupational cluster suggests a careful examination of the curriculum implications of these interests.

Physical Science Professional Cluster

Interests of students and parents in the physical science professional cluster are shown in Table 34. Overall, students and parents expressed moderate to low interest in these professions.

TABLE 33

STUDENT AND PARENT INTERESTS IN THE
ENTERTAINMENT AND RELATED OCCUPATIONAL CLUSTER
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232)		Parents (n=1,757)	
		Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1.	Actor, actress	215	38.0	52	55.0
2.	Athlete, professional	749	4.0	170	20.0
3.	Model	478	16.0	115	31.0
4.	Musician, singer	836	3.0	245	9.0
5.	Radio and TV announcer	351	26.0	122	27.0
	Totals	2,629	87.0	704	142.0
	Averages	525.8	17.4	140.8	28.4

TABLE 34

STUDENT AND PARENT INTERESTS IN THE
PHYSICAL SCIENCE PROFESSIONAL CLUSTER
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

Occupations	Students (n=4,232)		Parents (n=1,757)	
	Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1. Astronomer	110	67.0	20	85.0
2. Biologist	128	58.0	57	52.0
3. Chemist	108	68.0	57	52.0
4. Geologist	41	90.0	40	63.5
5. Meteorologist	35	95.5	27	75.5
6. Physicist	36	94.0	25	80.0
Totals	458	472.5	226	408.0
Averages	76.3	78.8	37.7	68.0

99

The professions of moderate interest were biologist, chemist and astronomer; whereas, low interest professions were physicist, meteorologist, and geologist. The professions in this cluster may have been viewed as highly academic, with less glamour and excitement than many of the other occupational choices included in the study.

Applied Physical Science Occupational Cluster

Table 35 reports interests in the applied physical science professions. Two of the professions in this cluster received very high ranks--architect and computer programmer/technician. Moderately high interest was indicated in computer programmer/technician. Moderately high interest was indicated in electrical engineering and in mechanical engineering by both students and parents. Other engineering professions were of moderate to low interest. However, as in the case of sales occupations, it may be that too many engineering options were provided, thus causing engineering interests to be distributed across several options. Both students and parents indicated moderate interest in the profession of ecologist, although it is doubtful that a clear understanding exists of what an ecologist is or does.

Human Services Professional Cluster

Interests in human services professions are reported in Table 36. The two most popular professions in this cluster were teacher/teacher aide and social worker, with each being ranked in the top

TABLE 35

STUDENT AND PARENT INTERESTS IN THE
APPLIED PHYSICAL SCIENCE PROFESSIONAL CLUSTER
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232)		Parents (n=1,757)	
		Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1.	Architect	518	13.0	247	8.0
2.	Computer programmer, technician	485	15.0	276	7.0
3.	Ecologist	112	65.0	63	50.0
4.	Engineer, agricultural	56	87.0	16	88.5
5.	Engineer, chemical	59	85.0	15	90.0
6.	Engineer, civil	96	70.0	68	47.0
7.	Engineer, electrical	196	44.0	133	25.0
8.	Engineer, industrial	79	73.5	57	52.0
9.	Engineer, mechanical	179	46.0	101	35.0
10.	Soil conservationist	42	88.5	31	70.0
	Totals	1,822	587.0	1,007	472.5
	Averages	182.2	58.7	100.7	47.3

TABLE 36

STUDENT AND PARENT INTERESTS IN THE
HUMAN SERVICES PROFESSIONAL CLUSTER
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

	Occupations	Students (n=4,232)		Parents (n=1,757)	
		Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1.	Accountant	335	28.0	223	12.0
2.	Airline pilot, copilot	433	19.0	125	26.0
3.	Clergy	68	81.0	50	57.5
4.	Home economist	154	53.0	119	28.5
5.	Lawyer	463	17.0	231	11.0
6.	Police officer	496	14.0	81	44.0
7.	Psychologist	355	25.0	111	32.0
8.	School counselor	163	52.0	76	46.0
9.	Social worker	679	8.0	349	5.0
10.	Teacher, teacher aide	732	5.0	401	4.0
	Totals	3,878	302.0	1,766	266.0
	Averages	387.8	30.2	176.6	26.6

10 by both students and parents. The profession of next greatest interest to students was that of police officer, although parents saw only moderate interest in it. The professions of lawyer, accountant, airline pilot/copilot, and psychologist were viewed very favorably by both students and parents. The human services profession of least interest to both students and parents was that of clergy.

Medical Professions Occupational Cluster

Of the four medical profession options on the questionnaires, that of physician/surgeon was of greatest interest, followed rather closely by veterinarian (see Table 37). Moderately high interest also was expressed in dentistry and pharmacy.

Occupational Preferences Not Listed in Questionnaire

Item 99 in the list of occupations on both the student and parent questionnaire called for the writing in of any desired occupations not listed. As Table 38 shows, 214 students and 114 parents wrote in an occupation. Although these numbers represent a small proportion of the numbers surveyed, it is worthwhile to note the occupational group within which the write-ins were classified. The largest number of write-ins from both students and parents are classified under the grouping "Other professionals." Most of these write-ins tended to select some specialized field within the more general professional titles included in the survey. The next most popular area for student write-ins was

TABLE 37

STUDENT AND PARENT INTERESTS IN THE
MEDICAL PROFESSIONS CLUSTER
BASED UPON CUMULATIVE OCCUPATIONAL SCORES AND RANKS

Occupations	Students (n=4,232)		Parents (n=1,757)	
	Cumulative Score	Rank in 99	Cumulative Score	Rank in 99
1. Dentist	188	45.0	119	28.5
2. Pharmacist	165	51.0	106	33.0
3. Physician, surgeon	386	22.0	240	10.0
4. Veterinarian	359	24.0	188	17.0
Totals	1,098	142.0	653	88.5
Averages	274.5	35.5	163.3	22.1

TABLE 38

CLASSIFICATION OF WRITE-INS OF OCCUPATIONS
BY STUDENTS AND PARENTS IN THE INTEREST SURVEY

	Occupational Grouping	Students (n=214)		Parents (n=114)	
		No.	%	No.	%
I	Health Services	7	3.3	6	5.3
II	Publishing Industry	9	4.2	8	7.0
III	Clerical	12	5.6	8	7.0
IV	Construction, Metalwork	14	6.5	9	7.9
V	Mechanics, Repairmen	11	5.1	2	1.7
VI	Hospitality Industry	2	0.9	1	0.9
VII	Human Services	13	6.1	1	0.9
VIII	Agribusiness*	23	10.7	7	6.1
IX	Entertainment and Related Industries **	20	9.3	23	20.2
X	Military Careers	19	8.9	3	2.6
XI	Housewife	3	1.4	0	0.0
XII	Self-employed, Business Owner	14	6.5	11	9.6
XIII	Sports and Related Fields***	19	8.9	1	0.9
XIV	Government Services	11	5.1	6	5.3
XV	Other Professionals	56	26.2	28	24.6

* Majority of write-in occupations dealt with wildlife management.

** Majority of write-in occupations dealt with the music industry.

*** Majority of write-in occupations dealt with coaching of athletics at all levels.

agribusiness, followed by entertainment and related industries, military careers, and sports and related fields. Over 20% of the parents' write-ins were classified under entertainment and related industries. Only three students wrote in housewife as their preferred occupation, while no parents specified this as a preference for their children.

Student/Parent Agreement in Occupational Choice

Since answer sheets used by both students and parents contained student identification numbers, it was possible to compare the degree of agreement between "matched pairs" of students and their parents. Table 39 shows the number of students and parents who agreed on first, second and third occupational choices. As would be expected, the highest degree of agreement was on the first choice (40%). The number of students and parents agreeing on second and third choice occupations were almost identical, 21% and 20%, respectively. Of all the occupational choices made between these matched pairs of students and parents, 27% of the choices were in agreement. Considering that there were 99 occupational options on the questionnaire, many of which were related, these percentages represent a substantial degree of agreement between students and parents. However, this finding was more substantially demonstrated in the earlier comparison of occupational ranks based upon student and parent preferences.

TABLE 39

STUDENT-PARENT AGREEMENT ON OCCUPATIONAL CHOICES

Agree on Choices?	Choices							
	1st		2nd		3rd		Total	
	No.	%	No.	%	No.	%	No.	%
YES	643	40.2	334	20.9	320	20.0	1,297	27.0
NO	958	59.8	1,267	79.1	1,281	80.0	3,506	73.0

Goal (Short Term/Long Term) for Occupational Preference

Another major means of checking the consistency between student occupational interests and their parents' expectations, was to ask whether various occupational choices were viewed as a short-term goal for achieving some other occupational objective or the long-term goal of the student's life work. Tables in Exhibit 8 show the number of times that each occupation was used as a short-term and long-term goal by students and their parents. By inspecting the column "All students" in each of those two tables, it was determined that students and parents agreed on the goal of the occupations in 80 out of the 99 cases (81%).[2]

[2] A binomial statistical test was performed between the students and parents occupational goal preferences. The value of this test was $z = -6.03$ and was significant at the .00003 level. This means that the chances are less than three in 10,000 that the high number of agreements occurred by chance.

"Matched Pair" Student and Parent Agreement on Occupational Goals

Using student identification numbers to match students with their parents, a high degree of agreement was found between students and parents on the goal or purpose they attach to occupational choices. Of the student-parent pairs, 75% agreed on the first choice, 65% on the second choice, and 63% on the third choice as shown in Table 40. Overall, students and parents agreed on 69% of the goal choices.

TABLE 40

STUDENT-PARENT AGREEMENT ON OCCUPATIONAL GOALS

Agree on Goals?	Choices							
	1st		2nd		3rd		Total	
	No.	%	No.	%	No.	%	No.	%
YES	480	74.7	216	64.7	202	63.1	989	69.2
NO	163	25.3	118	35.3	118	36.9	399	30.8

Occupational Features Preferred by Students and Parents

The questionnaire asked students and parents to indicate preference for occupational features of general job interest, not specifically related to any single job choice. Figure 10 shows the occupational features preferred by students and those which parents preferred for their children. The occupational feature most preferred by students was that of high pay, receiving 17.9%

of the total number of student responses. Parents also indicated a relatively strong preference for their children receiving high pay, as indicated by 12.7% of their responses given to this feature. The next most desired occupational feature was that of working with people, receiving 15.4% of the student responses and 15.0% of the parent responses. The occupational feature receiving the third highest endorsement by both students and parents was that of challenge and excitement, with 12.7% of both students' and parents' responses going to this feature. The most striking difference between student and parent preferences for occupational features was in regard to job security. This feature received 15.7% of parents' responses, but only 5.3% by students. The least preferred occupational features were those of status and prestige, setting one's own hours, working indoors, easy job/easy to learn, and working alone (mainly under own direction). Overall, moderate interest was shown in chance for advancement, regular working hours, working with ideas, working outdoors, pleasant working conditions, and work which requires travel.

"Matched Pair" Student and Parent Agreement on Occupational Features

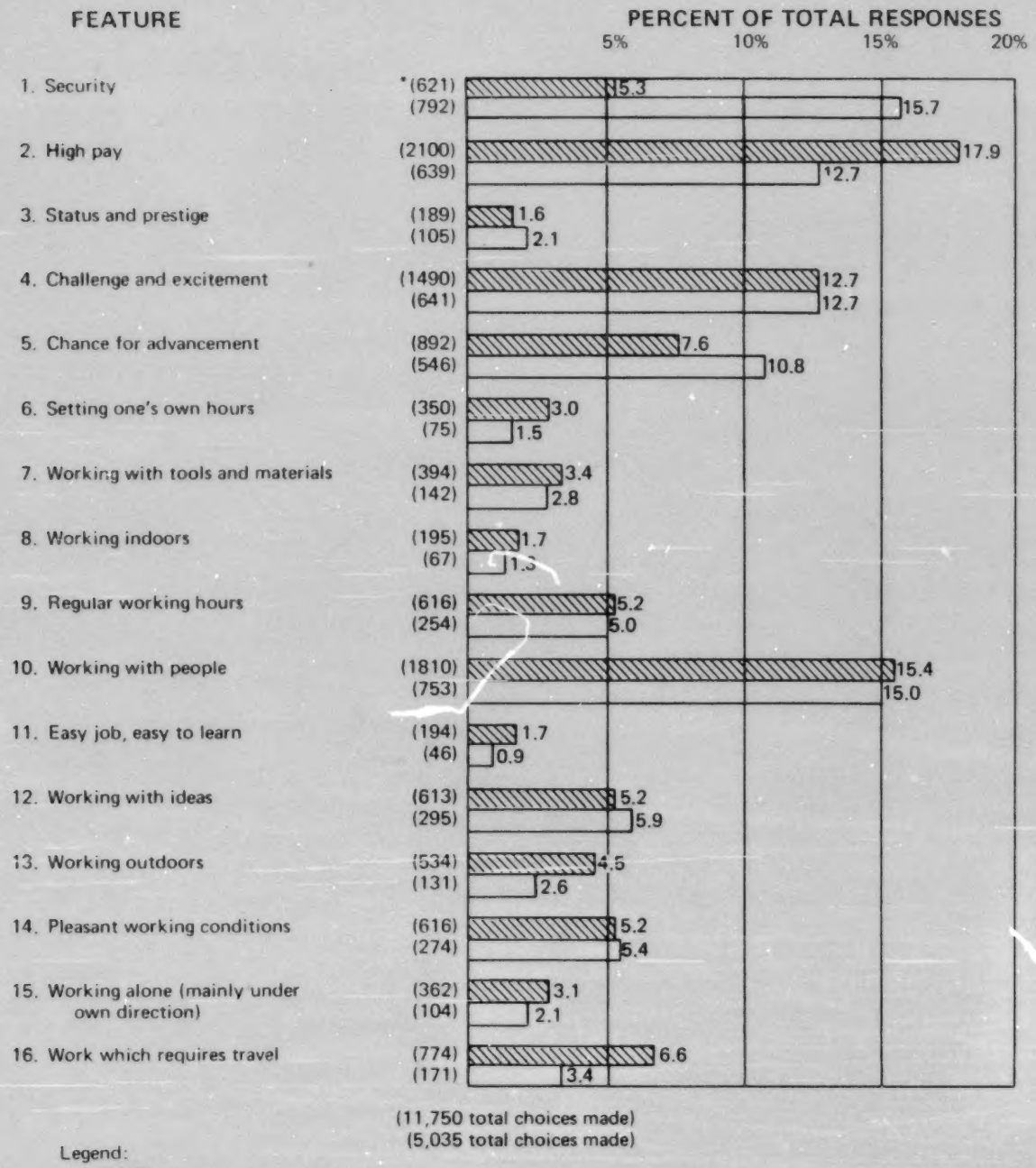
Table 41 shows the extent of student and parent agreement, based upon the use of student identification numbers to match students with their parents. Of these pairs, only 21.7% failed to agree on any of the occupational features. Agreement upon one occupational feature occurred in 39.2% of these pairs; agreement upon

two features, 27.1% of the pairs; agreement upon three features, 12.0% of the pairs. Overall, as is graphically illustrated in Figure 10, student and parent views toward occupational features were very similar.

TABLE 41

STUDENT-PARENT AGREEMENT ON OCCUPATIONAL FEATURES

Features Agreed Upon	Number	Percent
0	347	21.7
1	628	39.2
2	434	27.1
3	192	12.0
Totals	1,601	100.0



*Numbers in parentheses indicate the number of students and parents choosing each occupational feature.

Note: Although instructed to choose only three main features, not all students and parents made three choices.

Figure 10. Occupational Features Choices by Students and Parents

SUMMARY

CHAPTER IV
PERCEPTIONS OF CURRICULAR NEEDS BY SCHOOL PERSONNEL

This chapter deals with the analysis of the School Personnel Survey. Three subclasses of school personnel were surveyed: administrators, counselors, and teachers. The basic goal of the survey was to determine the importance of a list of occupations for curricular coverage in the secondary schools. Table 42 presents the rankings of the 98 occupations based on their cumulative scores. Of the first ten ranked occupations, seven are related to the construction and repair occupational clusters. The lowest ten ranked occupations were largely from within the entertainment and the hospitality occupational clusters. Generally, the skilled trades are rated highest; the applied professions and human services occupations are rated in the middle and the hospitality industry, non-applied professions and the entertainment industry are rated the lowest.

The 98 occupations were grouped into 14 occupational clusters for consideration on a summary basis. The highest rated clusters are related to the skilled trades and the lowest to the non-applied professions and entertainment. The overall ranks of occupational clusters were: (1) mechanics, repairmen, and installers; (2) construction and metalwork; (3) clerical; (4) health services;

(5) publishing; (6) human services; (7) applied physical science professions; (8) human services professions; (9) medical professions; (10) agri-business; (11) sales occupations; (12) hospitality industry; (13) physical sciences professions; and (14) entertainment and related fields. Table 44 provides a summary of these ranks and the cumulative scores which indicate the relative distance between ranks. Caution is urged here as these ranks are averages of occupations and do not give visibility to occupations rated very high. Importance of occupations within each cluster is analyzed in the body of Chapter IV (see Tables 45-59) along with a presentation of the survey procedures.

TABLE 42

IMPORTANCE RATINGS OF OCCUPATIONS
FOR CURRICULAR COVERAGE BY
SELECTED SCHOOL PERSONNEL (n=770)

Rank	Occupation	Cumulative* Rating Score
1.	Mechanic, auto	247.2
2.	Auto body repairman	244.3
3.	Electrician	238.5
4.	Carpenter	234.1
5.	Computer programmer, technician	232.7
6.	Mechanic, refrigeration and air-conditioning	230.2
7.	Plumber	227.9
8.	Mechanic, small engine	225.3
9.	Secretary, stenographer	223.2
10.	Accounting clerk, bookkeeper	223.1
11.	Bricklayer, mason	222.2
12.	Mechanic, diesel and heavy equipment	222.1
13.	Machinist	221.0
14.	Artist, commercial or graphic	220.1
15.	Radio and TV serviceman	217.6
16.	Keypunch operator	216.5
17.	Welder	213.7
18.	Draftsman	209.6
19.	Child care worker	204.5
20.	Beauty operator, cosmetologist	203.3
21.	Nurse	209.9
22.	Printer, pressman	207.8
23.	Laboratory technician	204.6
24.	Teacher, teacher aide	199.9
25.	Home economist	197.6
26.	Police officer	197.1
27.	Tool and die maker	196.6
28.	Dietician, dietician technician	195.6
29.	Dental hygienist, assistant	195.3
30.	Broadcasting technician, specialist	191.7
31.	Farmer	191.0
32.	Office clerk	190.8
33.	Journalist	190.6
34.	Mechanic, air craft	190.2
35.	Cook, chef	187.8
36.5	Medical technologist	187.7
36.5	Accountant	187.7
38.	Architect	187.4
39.	Medical secretary	186.5
40.	Telephone installer, repairman	184.6

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TABLE 42 (continued)

Rank	Occupation	Cumulative* Rating Score
41.	Chemist	183.3
42.	Engineering technician	181.6
43.	Barber	180.3
44.	Biologist	180.1
45.	Cashier	177.4
46.	Photographer	176.8
47.	Engineer, mechanical	176.1
48.	Ecologist	175.1
49.	Painter, buildings	174.1
50.	Occupational therapist	174.0
51.	Engineer, electrical	172.1
52.	Engineer, agricultural	171.3
53.	Library attendant, assistant	168.9
54.5	Salesperson, insurance, investments, real estate	168.7
54.5	Engineer, industrial	168.7
56.	Greenhouse operator, nurseryman	167.8
57.	Auto service station attendant	166.8
58.	Pharmacist	165.4
59.	Receptionist	164.7
60.	Therapist	164.5
61.	Engineer, civil	163.6
62.	Radio and TV announcer	163.3
63.	Forester	162.9
64.	Meat cutter and wrapper	161.5
65.	Engineer, chemical	161.0
66.	Recording and film technician, specialist	160.6
67.	Soil conservationist	160.1
68.	Salesperson, food merchandising	159.6
69.	Social worker	159.1
70.	Truck driver	157.2
71.	Physician, surgeon	156.3
72.	Landscaper	155.8
73.	School counselor	155.0
74.	Veterinarian	154.9
75.	Salesperson, building materials and hardware	153.7
76.	Salesperson, automotive, recreational, industrial	153.1
77.	Salesperson, home furnishings and housewares	152.4
78.	Dentist	152.0
79.	Physicist	148.0
80.	Lawyer	148.0
81.	Psychologist	147.5
82.	Florist	146.6
83.	Salesperson, agribusiness	146.3
84.	Geologist	144.9
85.	Food waiter, waitress	144.7
86.	Salesperson, fashion merchandising	138.3

TABLE 42 (continued)

Rank	Occupation	Cumulative* Rating Score
87.	Musician, singer	137.2
88.	Landscape attendant	134.6
89.	Athlete, professional	130.0
90.	Meteorologist	127.3
91.	Hotel or motel desk clerk	122.3
92.	Clergy	119.2
93.	Astronome	118.9
94.	Animal caretaker, trainer	113.1
95.	Airline steward, stewardess	101.6
96.	Airline pilot, copilot	98.5
97.	Actor, actress	73.7
98.	Model	50.7

*See body of Chapter IV for a detailed explanation of how the cumulative scores were calculated.

CHAPTER IV

PERCEPTIONS OF CURRICULAR NEEDS FOR SCHOOL PERSONNEL

This chapter deals with school personnel's perceptions of the need for the high school curriculum to cover the content and skills embodied in certain occupations. The purpose of obtaining such data is for use in the comparison of students' and parents' occupational interests and job demand data. The school personnel data yields a "second opinion" with regards to the interpretation of the American occupational structure. Students frequently do not possess adequate information concerning the world of work. The parent's input into the child's perceptions of job opportunities is often contingent upon the parent's prior experience and training in the world of work. Hence, the parent's perceptions of the occupational structure is rather narrowly focused upon the job skill level at which he is employed. For example, the skilled tradesman will have less complete job information about being a "biologist" than a person at the same training level, such as a physicist. A good way of phrasing the parent's perception is that it is narrowed in focus by blinders built in by his particular skill level. Consequently, the child's view of the world of work will be biased by parental interpretations.

A more realistic view of the occupational structure should be obtained from persons who are trained to prepare people for employment at all skill levels. The school administrators, teachers

and counselors should be able to paint a more realistic picture of job opportunities and the needs for specialized training to take advantage of these opportunities. Interpretations of the school personnel's response, then, is quite important since they on the average have a better knowledge of occupations at all skill levels than the parents and certainly the students.

Teachers, administrators, and counselors were surveyed seeking a response to the single basic question, "How important is an occupation in terms of the need for inclusion in the high school curriculum?" The number of school personnel who received the distributed questionnaire was 1,010. Of these 1,010, 770 responded yielding an overall response rate of 76.2%. The school personnel were asked to rate a list of 98 occupations as being very important to not important at all for inclusion in curricula.
Exhibit 9 contains the various cover letters and the questionnaire that the school personnel received. The distribution was handled internally by the school system as was the retrieval of the completed questionnaires. Individual personnel are not identifiable other than by their responses to a set of questions in the instrument that describes what position they hold within the school system.

Table 43 lists a breakdown of the school personnel surveyed by their area of primary responsibility. The administrators surveyed (n=115) were either principals or assistant principals from the school system from all educational levels, i.e., elementary (31% of total administrators, 4.7% of total sample); junior high

TABLE 43

SAMPLE CHARACTERISTICS OF SCHOOL PERSONNEL IN SURVEY
(n=770)

Type of Personnel	Area of Primary Responsibility: Elementary School	Junior High School	Senior High School	Totals
Teachers (Faculty Advisory Committee Members)	399	94	90	583
Counselors	4	32	36	72
Administrators (Principals and Assistant Principals)	36	25	54	115
TOTALS	439	151	180	770

(22% of total administrators, 3.2% of total sample); and senior high school (47% of total administrators, 7% of total sample). School administrators make up only 14.9% of the total sample. Seventy-two counselors were surveyed from the school system (9.4% of total sample). The greatest percentage of the counselors were from the junior high (44.4% of all counselors) and senior high school levels (50% of all counselors). Only 5.6% of the counselors work in the elementary schools. The largest response group to the survey were teachers (75.7%), primarily elementary school teachers. Elementary school teachers make up 68.4% of the teachers surveyed and 52% of the total sample. Because of their area of primary responsibility, elementary school teachers are probably the least familiar with high school curriculum needs in terms of suggesting development. Senior high and junior high school teachers and counselors and all administrators are more directly attuned to the curriculum development needs since their task areas deal primarily at the educational level where vocational and technical education is focused. Vocational education is not an immediate concern of elementary teachers based on the general teaching objectives of the elementary school, i.e., to teach basic communication skills. Because of this over-representation of elementary school teachers, special attention will be focused initially at determining whether or not teachers' perceptions of occupations for curricular development significantly varies from the other two classes of respondents. Before addressing this issue, a brief statement of the rating scheme used in the tabular presentations of the data will be presented.

Table 44 presents a summarization of the basic data in this chapter. The last two columns of the table present information based upon the five other columns in the table which reflect average response rates to the items in the column headings. To calculate the cumulative score in column six, the response categories (first five columns) were differently weighted according to the following scheme:

Not important	= 0
Somewhat Important	= 1
Important	= 2
Very Important	= 3
Not Sure	= 0

The percentage response within each response category was multiplied by its appropriate weight to create a score for the category. The response categories were then summed to produce the cumulative score. For example, Occupational Group 1, Health Services, the cumulative score is calculated in the following fashion:

Cumulative Score = %Not Important x 0 +
%Somewhat Important x 1 +
%Important x 2 +
%Very Important x 3 +
%Not Sure x 0 +

Cumulative Score = 6.08 x 0 + 15.30 x 1 + 43.12 x 2 + 30.92 x 3 + 3.40 x 0

Cumulative Score = 0 + 15.30 + 86.24 + 92.76 + 0 = 194.3

The range of the new calculated cumulative score ranges from 0 (where all people responded in the not important category) to 300 (where all responded in the very important category). A score of 150, then, is interpreted as relative ambivalence towards the occupation on the basis of importance for inclusion in the high school curriculum. Above 150 the occupation is important and below 150 the occupation was perceived as being relatively unimportant.

TABLE 44

AVERAGE PERCENTAGES OF IMPORTANCE RATINGS, CUMULATIVE SCORES, AND RANKS OF OCCUPATIONAL GROUPS FOR CURRICULAR COVERAGE,

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum						
	Not Important	Somewhat Important	Important	Very Important	Not Sure	Cumulative Score	Rank
Mechanics, repairmen & installers	4.52	13.90	36.93	41.73	2.12	212.95	1
Construction & metalwork	3.90	14.48	38.44	39.73	2.23	210.55	2
Clerical	5.67	18.54	39.74	33.14	1.59	197.44	3
Health services	6.08	15.30	43.12	30.92	3.40	194.3	4
Publishing industry	5.24	20.80	42.08	28.74	1.88	191.18	5
Human services	6.73	21.28	40.45	29.03	1.83	189.27	6
Applied physical science professions	9.38	19.73	39.75	25.86	4.30	176.81	7
Human services professions	15.09	19.88	35.20	23.56	4.99	160.96	8
Medical professions	16.45	18.45	34.18	23.45	6.20	157.16	9
Agribusiness	13.21	28.14	35.31	18.58	3.89	154.50	10
Sales occupations	10.10	30.53	37.83	15.66	4.07	153.17	11
Hospitality industry	17.56	25.58	34.14	19.54	3.22	152.48	12
Physical sciences professions	14.15	26.07	34.40	18.52	5.77	150.43	13
Entertainment & related fields	24.02	32.38	27.04	10.68	4.80	118.50	14

The rows in Table 44 represent average response to the categories across all occupations listed in that occupational cluster. The occupational groups listed in Table 44 are then ranked on the basis of their cumulative score, i.e., the highest cumulative score is ranked 1. The highest rank indicates the strongest perception of need for inclusion of coverage in the high school curriculum.

Earlier a question was raised concerning over-representation of teachers in the sample and whether or not a separate analysis by type of personnel is warranted. The basic question to be addressed is whether or not the occupational groups would be ranked differently by the school personnel. If their respective rankings are very similar, the sampling over-representation would be of minor consequence. To provide the answer to the question, several occupational groups were selected from those listed in Table 44 and were re-ranked according to how each class of school personnel would have ranked them. The selected occupations from Table 44 were: mechanics, repairmen and installers (rank 1 by total sample), clerical (rank 3 by total sample), human services (rank 7 by total sample), and physical science professions (rank 13 by total sample). If there is little differentiation in the ratings by class of school personnel, the rankings of the above four occupational groups should be exactly matched.

Table 45 represents the ranking by class of school personnel. As was expected, the ratings of the groups are exact across the school personnel. However, it is worth noting that the average cumulative score is lowest for teachers for all four occupational

TABLE 45

IMPORTANCE RATINGS OF SELECTED OCCUPATIONS FOR CURRICULAR COVERAGE BY SCHOOL PERSONNEL BY CLASSIFICATION

	Occupation*	Classes of School Personnel		
		Teachers	Counselors	Administrators
1.	Mechanics, repairmen, and installers	207.5	235.46	226.53
2.	Clerical	192.87	219.67	207.22
3.	Human services	184.92	215.65	194.45
4.	Physical sciences professionals	148.69	151.12	159.23

*The values reported in the table are cumulative rating scores based on a weighted total of responses to each response category. The description of this cumulative score is more explicit in the text.

groups. This means that the teachers response across all five response categories was more even than the other school personnel's. All three groups' perception of level of importance was consistent in that the differences between cumulative scores of occupations for each school personnel group were fairly consistent. The teachers' overall ratings were somewhat lower than the other two groups but the ranking of occupations across classes of personnel was exact. The over-representation of elementary school teachers does not greatly distort the rankings based on the responses of the combined sample.

The next section will deal with the analysis of Tables 46-59. The overall rankings of occupational groups and the rankings of the importance of single occupations within the groups will be examined. The tables from which Tables 46-59 were compiled are included in Exhibit 10 for those who wish to examine responses to single occupations more carefully or for those who might be interested in looking at differences in responses by class of school personnel to particular occupations.

Occupations which demand at least college training or post-secondary training of some sort fair very poorly in the ranking. Medical professions (doctors, dentists, etc.), human services professions (lawyers, teachers, etc.) are all ranked in the lower half in terms of importance. More academic than applied types of skills are devalued, at least in the high schools. The professions could probably be argued to be covered in the existing college preparatory curriculum. The fact remains that the more academically

oriented professions are played down. This response by the school personnel might reflect many things that are occurring in our society, i.e., devaluation of college education, and emphasis on occupational preparation for all students.

The following analysis of the individual occupational groups gives some further information for changes in curricula.

Health Services Occupations

School personnel's opinions as to the importance of curricular coverage for each of the health services occupations is summarized in Table 46. The percentage of personnel responding to various levels of importance can be summarized more accurately on the basis of cumulative scores, as was explained earlier, which provides a ranking of each occupation within the cluster. The rank of each occupation and the cumulative score of each are: (1) nurse (209.9); (2) laboratory technician (204.6); (3) dental hygienist/ assistant (195.3); (4) medical technologist (187.7); and (5) occupational therapist (174.0). Difference in cumulative scores provides a perspective as to the distance one rank is above or below another. Further the range of cumulative scores within the occupational cluster (from 174.0 to 209.9) establishes the significant variation within the group. None of the importance ratings, however, fall below the 150 level indicating that the occupation is not very important. Of the health services occupations, nursing is perceived as most important and occupational therapists as least important. Health services occupations rank relatively high among all groups (4th).

TABLE 46

IMPORTANCE RATINGS OF HEALTH SERVICE OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Dental hygienist, assistant	5.7	17.4	43.8	30.1	2.1	195.3
2. Laboratory technician	4.0	13.6	48.1	31.6	1.8	204.6
3. Medical technologist	5.6	18.1	44.3	27.0	3.9	187.7
4. Nurse	6.4	9.7	39.5	40.4	2.7	209.9
5. Occupational therapist	8.7	17.7	39.9	25.5	6.5	174.0
Totals	30.4	76.5	215.6	154.6	17.0	--
Average	6.08	15.3	43.12	30.92	3.4	194.3

Publishing Industry Occupations

The publishing industry occupations are ranked fifth among the fourteen occupational groups. Table 47 presents the ratings of the individual occupations within the group. The within-group ratings are: (1) artist (220.1); (2) printer, pressman (207.8); (3) journalist (190.6); (4) photographer (176.8); and (5) recording and film technician, specialist (160.6). All of the occupations are ranked above 150 with a moderate range of scores (220.1 to 160.6). The artist receives a relatively high score probably because the skill is related to many more occupational fields. For example, the artist could have easily been classified under entertainment, and so on. Since it is related to other groups, the utility of the skill as an occupation is enhanced. Hence, more prestige among raters.

Clerical Occupations

Clerical occupations ranked third among the 14 groups. (See Table 48.) The within-group rankings are: (1) secretary, stenographer (223.2); (2) accounting clerk/bookkeeper (223.1; (3) keypunch operator (216.5); (4) office clerk (190.8); (5) medical secretary (186.5), (6) cashier (177.4); and (7) receptionist (164.7). Again all the occupations are rated above 150 and two of the seven are ranked over 220. It is interesting to note that the secretary occupation is rated more highly than the medical secretary which usually demands additional skills than that of secretary. The within-group rankings do not necessarily follow perceptions of

TABLE 47

IMPORTANCE RATINGS OF PUBLISHING INDUSTRY OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Artist, commercial or graphic	1.7	13.9	41.9	40.8	0.6	220.1
2. Journalist	4.7	21.9	45.2	26.1	1.0	190.6
3. Photographer	6.9	25.6	42.9	21.8	1.7	176.8
4. Printer, pressman	2.6	15.8	42.3	35.8	2.2	207.8
5. Recording and film technician, specialist	10.3	26.8	38.1	19.2	3.9	160.6
Totals	26.2	104.0	210.4	143.1	9.4	--
Average	5.24	20.8	42.08	28.74	1.88	191.8

TABLE 48

IMPORTANCE RATINGS OF CLERICAL OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Accounting clerk, bookkeeper	1.4	11.9	43.5	41.4	0.6	223.1
2. Cashier	10.8	22.6	36.9	27.0	1.7	177.4
3. Keypunch operator	2.7	12.9	43.0	39.2	1.2	216.5
4. Medical secretary	6.0	21.7	41.9	27.0	2.6	186.5
5. Office clerk	6.1	19.4	42.5	28.8	1.9	190.8
6. Receptionist	10.1	30.1	31.6	23.8	2.2	164.7
7. Secretary, stenographer	2.6	11.2	38.8	44.8	0.9	223.2
Totals	39.7	129.8	278.2	232.0	11.1	--
Average	5.67	18.54	39.74	33.14	1.59	197.4

prestige levels or skill levels associated with that occupation. The ranking is based more on the approval of existing curricula.

Construction and Metalworking Occupations

Construction and metalwork occupations are rated very highly (second) among all occupational groups. The traditional trades are heavily represented in this group of occupations (see Table 49). The ratings within this category are: (1) carpenter (234.1); (2) plumber (227.9); (3) bricklayer, mason (222.2); (4) machinist (221.0); (5) welder (213.7); (6) draftsman (209.6); (7) engineering technician (181.6); and (8) painter, buildings (174.1). Six of the eight occupations are rated 200 or greater in terms of importance. A note on the school personnel's occupational information is warranted here. The low within category ranking of engineering technician is probably a function of lack of information. Generally, the engineering technician must have some basic skills in plumbing, carpentry, welding and so on to perform his job. The engineering technician must also have some additional technical type training covering architecture and design. The engineering technician, in terms of all around skills is the most highly trained, yet is not rated as high as those occupations that call for lower skill levels. It is possible that the school personnel do not have as much informational input with respect to the existing occupational structure as would be desirable.

TABLE 49

IMPORTANCE RATINGS OF CONSTRUCTION AND METALWORK OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Bricklayer, mason	2.5	13.9	36.5	45.1	1.3	222.2
2. Carpenter	1.0	10.1	36.4	50.4	1.0	234.1
3. Draftsman	2.2	15.5	43.5	35.7	1.7	209.6
4. Engineering technician	7.5	18.2	38.2	29.0	6.0	181.6
5. Machinist	2.6	9.4	41.9	42.6	2.5	221.0
6. Painter, buildings	9.6	24.8	35.5	26.1	1.9	174.1
7. Plumber	2.6	10.3	36.8	48.0	1.6	227.9
8. Welder	3.2	13.6	38.7	40.9	1.8	213.7
Totals	31.2	115.8	307.5	317.8	17.8	--
Average	3.9	14.48	38.44	39.73	2.23	210.6

Mechanics, Repairmen, and Installers

The first ranked occupational cluster is the mechanics, repairmen, and installers. Table 50 lists the rankings of the individual occupations within the clusters. These rankings are: (1) auto mechanic (247.2); (2) auto body repairman (244.3); (3) electrician (238.5); (4) refrigeration and air conditioning mechanic (230.2); (5) small engine mechanic (225.3); (6) diesel and heavy equipment mechanic (222.1); (7) radio and TV serviceman (217.6); (8) aircraft mechanic (213.3); (9) tool and die maker (196.6); (10) broadcasting technician specialist (191.7); (11) telephone installer, repairman (184.6); and (12) auto service station attendant (166.8). Five of the occupations within this cluster are listed in the top 10 of all 98 occupations. The only low rated occupation is the auto service station attendant which does not fit well with the general skill level of the other occupations in this group. The basic skilled trades are heavily represented in this cluster and hence the overall high ranking.

Hospitality Industry Occupations

Hospitality industry occupations are summarized in Table 51. The overall ranking for the category is low relative to the other groups (12th) and three of the five listed occupations fall below 150 in cumulative score. The individual occupational rankings were: (1) dietician/dietician technician (195.6); (2) cook/chef (187.8); (3) food waiter/waitress (144.7); (4) hotel or motel desk clerk (122.3); and (5) airline steward/stewardess (101.6).

TABLE 50

IMPORTANCE RATINGS OF MECHANICS, REPAIRMEN AND INSTALLERS OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Auto body repairman	2.1	7.0	31.8	57.9	0.4	244.3
2. Auto service station attendant	15.7	20.0	33.2	26.8	3.1	166.8
3. Broadcasting technician, specialist	4.5	21.3	42.9	28.2	2.2	191.7
4. Electrician	1.4	7.7	34.7	53.8	0.9	238.5
5. Mechanic, aircraft	5.1	21.8	38.3	30.6	3.5	213.3
6. Mechanic, auto	1.4	6.4	31.9	59.0	0.6	247.2
7. Mechanic, diesel and heavy equipment	2.7	10.3	38.7	44.8	2.6	222.1
8. Mechanic, refrigeration and air conditioning	2.5	10.6	36.6	48.8	0.9	230.2
9. Mechanic, small engine	2.3	10.5	38.1	46.2	2.2	225.3
10. Radio and TV serviceman	2.7	14.3	37.9	42.5	1.3	217.6
11. Telephone installer, repairman	8.7	20.3	39.1	28.7	2.6	184.6
12. Tool and die maker	5.1	16.6	39.9	33.4	4.2	196.6
Totals	54.2	166.8	443.1	500.7	25.4	--
Average	4.52	13.90	36.93	41.73	2.12	212.9

TABLE 51

IMPORTANCE RATINGS OF HOSPITALITY INDUSTRY OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Airline steward, stewardess	30.5	29.7	26.2	6.5	5.8	101.6
2. Cook, chef	7.3	22.6	38.2	29.6	1.3	187.8
3. Dietician, dietician technician	3.0	21.2	44.3	28.6	2.1	195.6
4. Food waiter, waitress	19.7	28.2	29.0	19.5	3.0	144.7
5. Hotel or motel desk clerk	27.3	26.2	27.8	13.5	3.9	122.3
Totals	87.8	127.9	170.7	97.7	16.1	--
Average	17.56	25.58	34.14	19.54	3.22	152.5

The low ranking of airline stewardess reflects the temporary nature of the occupation in terms of a career. Being a stewardess is relatively attractive to certain graduates yet is not perceived as very important by school personnel.

Human Services Occupations

Ranked sixth among all occupational groups, human services occupations listed here are generally covered in post-secondary programs. Table 52 lists the individual occupations within the group with the ranking: (1) child care worker (204.5); (2) beauty operator/cosmetologist (203.3); (3) barber (180.3); and (4) library attendant/assistant (168.9). The occupation with the highest ranking is not covered in normal high school vocational curricula. The title does not exactly represent the skill level necessary to perform the task. That is, a child care worker can mean anything from a baby sitter to a child psychologist. The point to be made is that not all the occupational titles that are listed give enough information concerning particular skills or skill levels necessary. In such an instance, the rating has to be made on other bases. For a child care worker, an appeal to services for children is made which is very difficult for an individual to name as not important.

TABLE 52

IMPORTANCE RATINGS OF HUMAN SERVICES OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Barber	8.3	21.6	43.5	23.9	1.9	180.3
2. Beauty operator, cosmetologist	6.1	15.5	41.7	34.8	1.2	203.3
3. Child care worker	5.5	17.7	35.2	38.8	1.9	204.5
4. Library attendant, assistant	7.0	30.3	41.4	18.6	2.3	168.9
Totals	26.9	85.1	161.8	116.1	7.3	--
Average	6.73	21.28	40.45	29.03	1.83	189.27

Agribusiness Occupations

Table 53 presents the results of the survey concerning agribusiness occupations by the school personnel. Generally, this occupational group is rated low (10th among all occupations) by the evaluators. The individual within group rankings are as follows: (1) farmer (191); (2) greenhouse attendant (167.8); (3) forester (162.9); (4) meat cutter and wrapper (161.5); (5) landscaper (155.8); (6) florist (146.6); (7) landscape attendant (134.6); and (8) animal caretaker/trainer (113.1).

Sales Occupations

Sales occupations as a group are rated eleventh by the school personnel. Within this group, shown in Table 54, there seems to be little differentiation in importance as to the type of goods that the salesperson deals with. The individual sales occupations are: (1) insurance, investments, and real estate (168.7); (2) food merchandising (159.6); (3) building materials and hardware (153.7); (4) automotive, recreational and industrial (153.1); (5) home furnishings and housewares (152.4); (6) agribusiness (146.3); and (7) fashion merchandising (138.3). The small range of scores (138.3 to 168.7) indicates that there is not much differentiation within this category.

Entertainment Occupations

Entertainment and related field occupations generate a high level of interest among the students and were rated low by school

TABLE 53

IMPORTANCE RATINGS OF AGRIBUSINESS OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Animal caretaker, trainer	24.9	29.7	30.0	7.8	6.0	113.1
2. Farmer	8.4	17.4	35.5	34.2	3.4	191.0
3. Florist	11.7	37.4	33.6	14.0	2.9	146.6
4. Forester	9.1	27.0	40.8	18.1	4.5	162.9
5. Greenhouse attendant	8.7	27.8	38.8	20.8	3.4	167.8
6. Landscaper	10.3	31.6	37.8	16.2	3.4	155.8
7. Landscape attendant	17.9	31.4	30.9	13.8	5.1	134.6
8. Meat cutter and wrapper	13.2	26.8	33.0	22.9	3.1	161.5
Totals	104.2	229.1	280.4	147.8	31.5	--
Average	13.0	28.6	35.0	18.5	3.9	154.5

TABLE 54

IMPORTANCE RATINGS OF SALES OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Salesperson, agribusiness	10.3	31.7	36.9	13.6	6.1	146.3
2. Salesperson, automotive, recreational and industrial	9.9	31.9	36.6	16.0	4.7	153.1
3. Salesperson, building materials and hardware	9.9	31.7	38.2	15.2	3.9	153.7
4. Salesperson, fashion merchandising	11.8	32.5	32.5	13.6	4.3	138.3
5. Salesperson, food merchandising	9.6	28.4	40.4	16.8	3.6	159.6
6. Salesperson, home furnishings and houseware	10.6	31.3	38.8	14.5	3.2	152.4
7. Salesperson, insurance, investments and real estate	8.6	26.2	41.4	19.9	2.7	168.7
Totals	70.7	213.7	264.8	109.6	28.5	--
Average	10.1	30.53	37.83	15.66	4.07	153.2

personnel (see Table 55). Rated last of the fourteen groups, all occupations listed, with the exception of radio and TV announcer, fall below an importance score of 150. The individual ratings of occupations within this group are: (1) radio and TV announcer (163.3); (2) musician, singer (137.2); (3) athlete, professional (130.0); (4) actor/actress (73.7); and (5) model (50.7). The two lowest rated of the 98 listed occupations are in this group, i.e., model and actor. The interest is high among the students for a number of reasons. Fame, money, travel, and rapid upward mobility are the drawing points toward these occupations. However, relatively few such jobs actually exist and the competition is substantial.

Physical Science Profession

The physical science professions are rated next to last of the 14 groups. A possible reason for the low rating is the lack of description of particular services that these occupations provide. The individual occupations are rated as: (1) chemist (183.3); (2) biologist (180.1); (3) physicist (148.0); (4) geologist (144.9); (5) meteorologist (127.3); and (6) astronomer (118.9). The summary of these occupations is included on Table 56. The within-category ratings generally reflect the essentiality of the service to the broadest range of people.

TABLE 55

IMPORTANCE RATINGS OF ENTERTAINMENT AND RELATED FIELDS OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Actor, actress	35.5	38.3	14.4	2.2	8.3	73.7
2. Athlete, professional	23.8	27.7	30.3	13.9	3.1	130.0
3. Model	35.5	32.7	18.8	6.0	5.8	50.7
4. Musician, singer	15.2	35.1	32.3	12.5	4.2	137.2
5. Radio and TV announcer	10.1	28.1	39.4	18.8	2.6	163.3
Totals	120.1	161.9	135.2	53.4	24.0	--
Average	24.02	32.38	27.04	10.68	4.8	118.5

TABLE 56

IMPORTANCE RATINGS OF PHYSICAL SCIENCES
PROFESSIONAL OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Astronomer	20.5	33.4	29.1	9.1	6.8	118.9
2. Biologist	8.4	19.4	40.6	26.5	3.6	180.1
3. Chemist	8.2	20.5	38.8	28.4	3.1	183.3
4. Geologist	12.1	30.3	37.5	13.2	6.1	144.9
5. Meteorologist	16.6	33.4	29.4	11.7	7.9	127.3
6. Physicist	19.1	19.4	31.0	22.2	7.1	148.0
Totals	84.9	56.4	206.4	111.1	34.6	--
Average	14.15	26.07	34.4	18.52	5.77	150.4

Applied Physical Sciences

The applied physical sciences are rated seventh among all the occupational groups. The difference in overall rating between this group and the physical science professions group is probably due to the fact that these occupational titles give more information of what tasks these individuals actually perform. To be able to rate accurately, information is necessary. Engineers and architects build bridges and highways; but what do physicists do? The differential amount of information in job titles plus the perception of essentiality of services may explain why the applied professions are rated higher. The individual occupational ratings are calculated from Table 57: (1) computer programmer/technician (232.7); (2) architect (187.4); (3) engineer/mechanical (176.1); (4) ecologist (175.1); (5) engineer/electrical (172.1); (6) engineer/agricultural (171.3); (7) engineer/industrial (168.7); (8) engineer/civil (163.6); (9) engineer/chemical (161.0); and (10) soil conservationist (160.1). It is interesting to note that ecologist is rated above some of the other well defined positions. Ecologist elicits a response to "save the environment" in people, but it is likely that not many can describe what an ecologist actually does.

Human Services

Human services (Table 58) are rated just below the average rating for all groups. The individual occupational ratings are: (1) teacher/teacher aide (199.9); (2) home economist (197.6); (3) police officer (197.1); (4) accountant (187.7); (5) social

TABLE 57

IMPORTANCE RATINGS OF APPLIED PHYSICAL SCIENCE PROFESSIONAL OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Architect	7.3	19.6	41.6	28.2	1.8	187.4
2. Computer programmer, technician	1.4	9.5	37.8	49.2	1.0	232.7
3. Ecologist	7.7	23.8	38.3	24.9	4.2	175.1
4. Engineer, agricultural	10.8	19.4	39.2	24.5	5.2	171.3
5. Engineer, chemical	12.3	21.6	38.8	20.6	5.7	161.0
6. Engineer, civil	11.4	19.6	42.9	19.4	5.8	163.6
7. Engineer, electrical	11.0	18.3	40.6	24.2	4.8	172.1
8. Engineer, industrial	11.3	20.5	39.6	23.0	5.1	168.7
9. Engineer, mechanical	10.0	18.4	41.2	25.1	4.5	176.1
10. Soil conservationist	10.6	26.6	37.5	19.5	4.9	160.1
Totals	93.8	197.3	397.5	258.6	43.0	--
Average	9.38	19.73	39.75	25.86	4.3	176.8

TABLE 58

IMPORTANCE RATINGS OF HUMAN SERVICES
PROFESSIONAL OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Accountant	6.6	17.4	48.4	24.5	1.9	187.7
2. Airline pilot, copilot	30.1	31.9	21.6	7.8	7.3	98.5
3. Clergy	25.2	22.1	26.8	14.5	10.0	119.2
4. Home economist	4.9	17.8	43.4	31.0	1.9	197.6
5. Lawyer	19.1	20.0	34.0	20.0	6.2	148.0
6. Police officer	7.3	14.9	38.3	35.2	3.1	197.1
7. Psychologist	17.7	21.7	33.8	19.4	6.1	147.5
8. School counselor	17.4	18.7	31.4	24.5	6.0	155.0
9. Social worker	14.5	20.1	36.8	21.8	4.8	159.1
10. Teacher, teacher aide	8.1	14.2	37.5	36.9	2.6	199.9
Totals	150.9	198.8	352.0	235.6	49.9	--
Average	15.09	19.88	35.20	23.56	4.99	161.0

worker (159.1); (6) school counselor (155.0), (7) lawyer (148.0); (8) psychologist (147.5); (9) clergy (119.2), and (10) airline pilot/copilot (98.5). Teacher and teacher aide occupations are rated as being fairly important for curricular coverage. These skills are almost always centered around receiving some college training yet the rating is high. The differentiation made within this occupational group is difficult to explain without returning to the argument that the services perceived as most essential are the highest rated. On this basis, it is interesting to note that the clergy is rated (119.2).

Medical Professions

The medical profession occupations are rated below the average rating (ninth). The within-category ratings derived from Table 59 are: (1) pharmacist (165.4); (2) physician/surgeon (156.3); (3) veterinarian (154.9); and (4) dentist (152.0). The overall low rating of this category has to reflect the infeasibility of these occupations for curricular coverage in the high school. The specialized skills needed in these occupations cannot be provided in the high schools.

In summarizing the survey of school personnel, several key ideas emerge. The importance ratings appear to have been completed using several bases: (1) essentiality of the service provided to the broad population, (2) degree of skill level information about each occupation, (3) the degree to which the occupation is covered at other levels of formal education, (4) perception of student

TABLE 59

IMPORTANCE RATINGS OF MEDICAL PROFESSION OCCUPATIONS FOR CURRICULAR COVERAGE

by

SELECTED SCHOOL PERSONNEL
(n=770)

Occupation	Percentage Responding to Each Category on Importance for Coverage in Curriculum					Cumulative Score
	Not Important	Somewhat Important	Important	Very Important	Not Sure	
1. Dentist	16.6	21.6	33.4	21.2	6.2	152.0
2. Pharmacist	13.6	17.3	38.8	23.5	5.1	165.4
3. Physician, surgeon	20.1	14.8	26.2	29.7	7.9	156.3
4. Veterinarian	15.5	20.1	38.3	19.4	5.6	154.9
Totals	65.8	73.8	136.7	93.8	24.8	--
Average	16.45	18.45	34.18	23.45	6.2	157.2

interest, and (5) general information about the occupational structure and employment needs. The individual occupations rated and described within the text of this chapter may provide some assistance in innovating new programs where some need is perceived. The high rating of computer programmer, technician may suggest a more extensive curricular coverage in the high school. Such skills can be taught at the high school level. The users of this research are encouraged to explore the tables presented in this chapter and also the aggregate tables in Exhibit 10 to answer any specific questions about a given profession.

CHAPTER V

RECOMMENDATIONS

Recommendations offered in this chapter are based on the survey findings reported in the four preceding chapters. Included are recommendations for vocational curricula and enabling recommendations concerning program development and facilities for the Metropolitan Public Schools.

Similarities and variations among employment demands, student interests, and opinions of school personnel were noted in preceding chapters. High demand occupations many times had relatively low student interest and vice versa. However, when a cluster of related occupations are viewed together, many of these extreme differences are reduced due to the counteracting effects of varying demands and interests for occupations within clusters.

Further, since the majority of high school students do not have firm occupational plans, clusters of vocational curricula are desirable which cover a broad range of occupational needs and individual interests.

Table 60 provides a summary of the results from the surveys by occupational cluster. Included are job openings for 1976 (with estimated number of openings and rank of the cluster based on job openings), student interests (with average rank and rank for each cluster), and school personnel opinions of importance

TABLE 60

SUMMARY OF EMPLOYMENT DEMAND, STUDENT INTERESTS, AND SCHOOL PERSONNEL VIEWS BY OCCUPATIONAL CLUSTER, WITH PRIORITY RANKINGS

	Job Openings		Student Interests		School Personnel				Overall Ranks* Except Professional Clusters
	Number	Rank	Average Rank	Rank	Cumulative Score	Rank	Sum of Ranks	Overall Ranks	
Clerical	2808	1	29.9	2	197.4	3	6	1	1
Hospitality	1050	3	62.0	12	152.5	12	27	11	9
Construction and Metalworking	766	5	58.5	10	210.6	2	17	4	3
Mechanics, repairmen and installers	684	7	55.5	7	213.0	1	15	2.5	2
Health services	557	8	45.6	6	194.3	4	18	5	4
Human services	765	6	57.0	9	189.3	6	21	6.5	5.5
Publishing/printing	201	12	33.6	4	191.2	5	21	6.5	5.5
Agribusiness	284	11	56.2	8	154.5	10	29	12	10
Entertainment and related fields	455	9	17.4	1	118.5	14	24	8.5	7
Sales	1211	2	75.5	13	153.2	11	26	10	8
Human services professionals	1047	4	30.2	3	161.0	8	15	2.5	
Medical professionals	398	10	35.5	5	157.2	5	24	8.5	
Applied physical sciences professionals	199	13	58.7	11	176.9	7	31	13	
Physical science professionals	19	14	78.8	14	150.4	13	41	14	

*Basis for priority recommendations:

Ranks 1-3 = First Priority
Ranks 4-7 = Second Priority
Ranks 8-10 = Third Priority

(with cumulative score and rank of each cluster). The "Sum of Ranks" is computed by adding the ranks of each cluster across the three surveys. The overall ranks are derived by numbering the clusters from one to fourteen moving from the lowest to highest "Sum of Ranks."

The column to far right excludes the professional clusters, since post-secondary education is required to prepare for most professions, giving focus to overall ranks of skilled level occupational clusters.

Overall ranks of the occupational clusters in Table 60, excluding professional clusters, formed the basis for the following recommendations for vocational curricula.
Overall rank of clusters was used as the bases for designating curricula priorities. Clusters ranked one through three were designated as first priority, clusters ranked four through seven as second priority, and clusters ranked eight through ten as third priority.

Points which should be kept in mind when reviewing these recommendations are:

1. All three priorities suggest the need for vocational curricula.
2. School resources (staff, facilities, etc.) should be apportioned across the three priority areas.
3. First priority clusters generally possess a greater degree of employment demand and student interest than second priority clusters.
4. Third priority clusters possess sufficient employment demand and student interest for curricular coverage.

5. Occupational titles within clusters do not necessarily possess equal employment demand and student interest. Detailed tables in the exhibits of this report should be reviewed carefully when assigning school resources to the priority clusters.

Recommendations for Vocational Curricula

First Priority

Secretarial

Secretary
Medical secretary
Music secretary
Typist
Stenographer
Receptionist
Word processing typist*

Clerks

Bank teller
Office clerk
Bookkeeper
Cashier

Data Processing

Keypunch operator
Computer programmer

Automotive

Auto mechanic
Auto body repairman
Auto service station attendant

Electrical

Refrigeration and air conditioning
Radio and TV serviceman
Telephone installer, repairman
Appliance repairman
Electrician

---

*Based upon the "write-in" responses of knowledgeable experts.

Aircraft

Aircraft mechanic
Aircraft line service personnel*

Other Mechanics

Diesel and heavy equipment mechanics
Farm machinery mechanics

Other

Office machine repairmen
Outdoor vehicle and equipment repairmen

Metalwork

Machinists
Tool and die maker
Sheet metal worker*
Welder

Construction

Carpenter
Brickmason
Plumber and pipe fitter
Painter
Draftsman*
Building maintenance repairman

Second Priority

Health Services

Ambulance driver, attendant
Practical nurse
Nurse aide, orderly
Health aide
Dental assistant

Education

Teacher aides
Library attendant, assistant

---

*Based upon the "write-in" responses of knowledgeable experts.

Human Care

Child care workers
Institutional, home aides

Communication Arts

Editor
Reporter
Graphic artist
Photographer
Recording technician
Printer, pressman
TV camera operator, song pluggers, studio technicians, proppersons, etc.

Other

Cosmetologists
Rock band musicians

Third Priority

Horticulture

Landscape attendant
Landscaper
Greenhouse operator
Greenskeeper
Equipment mechanic, tree service worker, etc.

Food Services

Cook, chef
Waiter, waitress
Busboy, dishwasher

Sales

Agribusiness salesperson
General retail salesperson

Hotel/Motel

Desk clerk
Housekeeper
Janitor

---

*Based upon the "write-in" responses of knowledgeable experts.

Other

Farmer
Butcher/meat cutter
Delivery and routeman

Enabling Recommendations

Curriculum

1. Plan and offer vocational curricula on a cluster approach, rather than intensive, specialized training in a narrow area; e.g., automotive area including auto mechanics, auto body repair, radiator repair, service station attendant, wheel alignment and tire service, auto parts sales, etc. versus Volkswagen mechanics

2. Develop instructional programs involving two or more vocational services or other areas for curricular needs beyond the capabilities of a single service area. Specific examples where this appears to be needed follow:

   a. Agribusiness salespersons (agriculture and distributive education)

   b. Medical secretary (business education and health occupations education)

   c. Music secretary (business education and music department)

   d. Institutional, home aides (health and home economics)

3. Continuously consider the use of the most interesting and descriptive titles for each of the vocational courses, particularly those that typically have low student enrollments. An example is "small gasoline engines" usually implying lawn mowers and garden tillers. A title that is more interesting to students and more descriptive is "outdoor vehicle and equipment mechanic," which includes work and pleasure equipment such as chain saws, boat motors, motorcycles, snowmobiles, etc.

4. Develop curriculum for new vocational education programs not previously offered by the schools. Areas likely to need new curriculum are ambulance driver/attendants,

outdoor vehicle and equipment mechanic, medical secretary, music secretary, institutional/home aides, musicians and singers, and agribusiness salespersons.

In-service

5. Provide in-service education programs for vocational education personnel in the revision of existing curricula and the development of new curricula.

6. Establish a system for producing planned change in vocational education in Metro Public Schools. (Such a system should include selection, training, and follow-up assistance for pre-identified change agents among administrators, supervisors, coordinators, and teachers of vocational education. Without such a system for implementing needed changes, plans for improvement of vocational education are likely to be hampered.)

Guidance

7. Implement a career information program to provide accurate and meaningful job information to teachers, counselors, students and parents. (Parents are of critical important since they are the most influential of all persons on a student's career choice.)

8. Establish an expanded job placement program to serve student needs for part-time employment during school and full-time employment upon graduation. Secondary purposes served by placement programs are the evaluation and feedback on the curriculum and instruction, and continuous feedback on the employment demands/job openings within the Metropolitan area.

Research and Evaluation

9. Conduct a review every three years of each vocational course offering to identify improvement that may be needed and ways to accomplish the improvements. Review teams should consist of three to five persons from business and industry related to the vocational education program, one state vocational education staff member, and two Metro vocational educators.

10. Conduct periodic, small-scale employment needs assessment surveys when segments of the employment sector are believed to be rapidly changing, and when new or emerging occupations are observed in significant numbers.

11. Metro vocational educators repeat these employment needs, student and parent interests and school personnel surveys in 1980.

Advisory Committees

12. Establish a special advisory committee to assist with the development of vocational education programs to serve the music and communication arts industries.

13. Explore alternative ways to utilize special task forces of business/industry representatives in general planning concerns and in new or specialized areas of vocational preparation. Some examples are:

    a. Reviewing equipment needs for new, redirected, and long established programs.

    b. Studying placement needs and trends.

    c. Identifying new teachers.

    d. Identifying industry-related training options.

14. Actively utilize the Metro Schools' Vocational Education Advisory Council for monitoring employment trends, assessing effectiveness of the curriculum and instructional programs, and providing guidance and support for the total program of vocational education.

Facilities

15. Conduct a study of the needed facilities and equipment for offering effective programs of instruction in new vocational education programs. (Guides for planning facilities developed by The Center for Vocational Education include "A General Guide for Planning Facilities for Occupational Preparation Programs" and specific guides for planning facilities in fourteen program areas: automotive service, business and office occupations, data processing, dental assistants, dental

hygienists, dental laboratory technicians, electrical technology, home economics, laboratory animal science, machine trades, medical assistants, medical secretaries, medical x-ray technicians, and metallurgy technology. (See Bibliography.)

16. Explore the possibilities for developing and/or utilizing existing shopping malls in selected areas of the Metropolitan community to provide experience-based instruction in as many vocational and occupational areas as possible. Malls should include classroom space adjacent to the experience area which is used by customers. Composition of malls may include all or some of the following units, based on the specific area where each mall is to be located, which will enable the following experience-based instructional programs to be conducted in actual settings.

    Motel (5-15 room capacity): housekeepers, front desk clerks, bellmen, cashiers, bookeepers, etc.

    Restaurant: cook, chef, short order cook, waiter, waitress, busboy, dishwasher, cashier, musicians as entertainers

    Beauty Shop: cosmetologists

    Service Station: auto service station attendants, engine tune-up specialists, auto mechanics

    Pet Center: small animal caretakers, salespersons

    Garden Center: Agribusiness salespersons, landscapers, landscape attendants

    Florists and Greenhouse: florist assistants, floral designer, greenhouse attendant

    Outdoor vehicle and equipment sales and service: mechanics, salespersons

    Further information on using existing shopping malls may be obtained by contacting Mr. Conrad Shuman, State Director of Vocational Education, Delaware Department of Education, J. G. Townsend Building, Dover, Delaware 19901, (302) 678-4639. Information on constructing mall-type facilities may be obtained by contacting Perkins and Will Architects, Inc., 309 West Jackson Boulevard, Chicago, Illinois 60606, (312) 427-9300.

17. Plan special programs of vocational education instruction in facilities of business and industry for times when facilities are not normally used, e.g., late afternoons, evenings, and Saturdays. These settings will provide laboratory facilities worth millions of dollars and real job environments which could not be duplicated by school. Music, insurance, warehouse, power plants, and telephone service are just a few prime examples where such programs would be most helpful. An effective program may require a full-time staff member similar to Los Angeles Schools.

Administration

18. Expand the concept of continuing education to out-of-school persons by making all vocational education facilities and curricula available to programs for out-of-school persons.

19. Develop expanded continuing education programs to serve post-high school and adult day and evening high school needs from throughout the Metro area. This development can be fostered in the suburban areas by Metro Public Schools assuming responsibility for the operation of the Nashville Area Vocational School and in the mid-city area by converting Hume-Fogg School or another centrally located facility into a post-high school and adult education center. These facilities could serve broader areas of employment training and retraining of short term (a few days to a few months) to long term duration (one year or more) and provide a more coordinated approach to Greater Nashville's employment training needs.

20. Establish or designate a current administrative position to direct the implementation of career education throughout the Metropolitan Public Schools maximizing the potential of vocational education and the more academic programs in the career development and career preparation of all students.

The Center for Vocational Education, The Ohio State University, will provide additional contract services and assistance in implementing any of the recommendations resulting from the study on request by Metro Public Schools. Special expertise is

available in curriculum development and revision, facility planning, implementation of career education (kindergarten through 14), career planning information system, placement programs, and in-service staff development.

APPENDIX

EXHIBIT I

Questionnaires and Related Information for

Nashville Area Employment Needs Survey for 1976

- Questionnaire titled "Nashville Area Employment Survey for 1976"
- Guidelines for Interviewing Employers/Agencies
- List of Nashville Area Agencies/Organizations for Employment Needs Survey
- Letter from E. C. Miller, Director of Vocational Education, to Metro Vocational Teachers

Interviewer _____

Date of Interview _____

NASHVILLE AREA EMPLOYMENT SURVEY FOR 1976*

Purpose: To gain the opinions of key persons in the business community relative to:

(1) whether the 1976 greater Nashville projections of employment by occupations made by the Bureau of Labor Statistics is believed to be accurate, and

(2) what the entry requirements are for beginning employment in selected occupations

which will aide in selecting the Vocational Education Courses to be offered in each of the new comprehensive high schools that are being planned.

Company, Firm, Organization or Agency:

A. Name of Company _____

B. Person Interviewed _____

C. Title _____

D. Phone Number _____

*This survey is being done at the request of the Metropolitan Public Schools as part of a contract with The Center for Vocational Education, The Ohio State University.

INSTRUCTIONS

PART A

Some 60 occupations are listed on the following pages along with the projections of total employment and total job openings by occupation for 1976. These projections were prepared in 1973 by the Bureau of Labor Statistics. Your opinion is needed relative to changes that may be occuring within occupations familiar to you.

You are requested to give:

(1) Your estimate of job openings for 1976 in the column provided for each occupation for which you are generally familiar with employment trends. If you believe the number of job openings listed:

(a) is about right--Place a ✓ mark in column labeled "your estimate".

(b) is too low -- Enter number reflecting "your estimate".

(c) is too high -- Enter number reflecting "your estimate".

(2) Entry Requirements: After providing your estimate of job openings for certain occupations, indicate the extent to which the entry requirements apply to each of those occupations. For each entry requirement, place an "M" for Most of the time, "S" for Sometimes, and leave "blank" if the response is seldom or never. Insert minimum age, minimum education, and prior experience when applicable.

RESPOND ONLY TO THOSE OCCUPATIONS FOR WHICH YOU HAVE A GENERAL FAMILIARITY.

Assumptions: To guide the 1976 estimates are:

(a) Economic Conditions will not further decline.

(b) Planned growth and expansion will occur as scheduled.

(c) Geographical area is Davidson County and seven adjoining counties (Cheatham, Dickson, Robertson, Rutherford, Sumner, Wilson, and Williamson).

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PART A

Occupations	1976 Employment Projections: Bureau of Labor Statistics: Total Employment	1976 Employment Projections: Bureau of Labor Statistics: Total Job Openings	1976 Employment Projections: Your Estimate: Total Job Openings	Entry Requirements: Bondable	Health Certificates	License	Apprenticeship	Written Examination	Minimum Age	Minimum Education	Prior Experience
Example:											
Janitor									18		
Cosmetologist					M	M		M	18		
1. Health Services											
Dental Assistants	256	23									
Practical Nurses	1,299	124									
Nurse aides, Orderlies	2,462	181									
Health Aides	665	63									
2. Publishing Industry											
Compositors & Typesetters	801	29									
Photoengravers, Lithographers	267	14									
Pressmen & Plate Printers	920	36									
Editors & Reporters	946	73									

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Occupations	1976 Employment Projections: Bureau of Labor Statistics: Total Employment	1976 Employment Projections: Bureau of Labor Statistics: Total Job Openings	1976 Employment Projections: Your Estimate: Total Job Openings	Entry Requirements: Bondable	Health Certificates	License	Apprenticeship	Written Examination	Minimum Age	Minimum Education	Prior Experience
3. Clerical Occupations											
Bank Tellers	632	50									
Bookkeepers	5,420	433									
Cashiers	3,042	257									
Clerks, payroll, shipping, etc.	3,260	229									
Keypunch Operators	1,058	60									
Medical Secretaries	226	22									
Secretaries	10,849	1,049									
Typists	2,979	289									
Receptionists	1,289	110									
4. Construction & Metalworking Craftsmen											
Brickmasons & Stonemasons	989	44									
Carpenters	2,443	132									
Electricians	1,696	90									

Machinists	999	54									
Tool & Die Makers	586	25									
5. Mechanics, Repairmen & Installers											
Aircraft	518	36									
Appliance	474	23									
Auto	2,601	88									
Auto Body Repair	231	4									
Auto Service Station Attendant	1,335	51									
Office Machine	121	4									
Diesel & Heavy Equipment	1,610	73									
Refrigeration & Air Conditioning	539	37									
Radio & TV Repairmen	476	15									
Telephone Installers & Repairmen	975	34									
6. Hospitality Industry											
Busboys, Dishwashers	561	34									
Cooks, Chefs	2,569	199									
Housekeepers	719	55									
Janitors & Sextons	3,530	245									
Waiters, Waitresses	2,986	250									
Meat Cutters & Wrappers	942	34									
Recreation & Amusement Attendants	149	8									

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Occupations	1976 Employment Projections: Bureau of Labor Statistics: Total Employment	1976 Employment Projections: Bureau of Labor Statistics: Total Job Openings	1976 Employment Projections: Your Estimate: Total Job Openings	Entry Requirements: Bondable	Health Certificates	License	Apprenticeship	Written Examination	Minimum Age	Minimum Education	Prior Experience
7. Human Services											
Barbers	633	40									
Cosmetologists	1,964	177									
Child Care Workers	601	91									
Library Attendants, Assistants	401	35									
Teacher Aides	414	44									
8. Other											
Air Traffic Controllers	46	1									
Animal Caretakers, except farm	117	4									
Groundskeepers, gardeners, except farm	682	27									
Farmers	1,257	28									
Computer programmers	505	28									
Delivery & Routemen	2,163	93									
Truck Drivers	5,384	185									
Photographers	220	13									
Retail Salespersons	9,300	744									
Sewers and Stitchers	2,997	237									

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PART B

Instructions

Listed below are other occupations for which projections were not available. For each occupation "generally familiar" to you indicate the number of job openings you estimate will occur in 1976.

Also, on the next page list any other occupations of the skilled and semi-skilled levels which you feel offer employment opportunities, provide a brief description of the occupation, and indicate your estimate of total job openings in 1976.

Other Occupations	Brief Descriptions	Your Estimate Total Job Openings, 1976
1. Outdoor vehicle & Equipment Mechanics	Repair marine motors, lawn mowers, garden tillers, motorcycles, chain saws, etc.	
2. Building Maintenance Repairmen	Perform small repairs in the areas of electricity, plumbing, carpentry, painting, etc. in homes and industry.	
3. Institutional, Home Aides	Assist in care and guidance of physically and mentally impaired persons of all ages.	
4. Ambulance Drivers, Attendants	Assist with emergency and normal transportation of persons requiring ambulance equipment.	
5. Graphic Artists	Design and prepare art work for a variety of printing purposes.	
6. Horticultural Assistants	Performs work in greenhouses, nurseries, and florists involving growing and selling a variety of plants.	

Other Occupations	Brief Descriptions	Your Estimate Total Job Openings, 1976
7. Room/Front Desk Clerks	Register guests in hotels or motels and handle other duties such as mail, keys, information, and phones.	

GUIDELINES FOR INTERVIEWING EMPLOYERS/AGENCIES

1. Make appointment by phone if possible.

2. The person interviewed should be an administrator, manager, owner, personnel director/supervisor or some other person who is "generally familiar" with the employment trends of the occupations in his/her firm or agency and the Metro area.

3. Time required to complete interview is 15 to 30 minutes.

4. Gain appointment or entry. Be prepared to point out:

   WHY ARE YOU HERE? I am representing Metro Public Schools. We need to talk with you about employment trends occurring in occupations within your field of work. The purpose of the information is to help determine the vocational education programs that should be offered in the high schools of Nashville-Davidson County. We have projections of employment needs made in 1973 for 1976 and we need to get your opinion of changes that may be occurring.

   WHY SHOULD I GIVE YOU THE DATA?

   (1) To better utilize your tax dollars in planning the most appropriate educational programs.

   (2) To provide guidance to students as to which occupations truly offer employment opportunities.

   (3) To help the public schools better serve the needs of the community.

5. Point out that you want to gain his/her opinions about employment trends and entry requirements for the occupation in which he/she has "GENERAL FAMILIARITY."

6. Give him/her a questionnaire and suggest that you review the instructions to Part A with them.

7. Ask interviewee to look over the occupational catagories listed and identify those catagories with which he/she is generally familiar.

8. Suggest that you mark a copy of questionnaire as he/she shares their opinions. Be aware that the 1976 projections of TOTAL EMPLOYMENT and TOTAL JOB OPENINGS (job openings defined as labor force separations and growth creating new jobs) are for Davidson and seven other counties.

9. If interviewee is struggling for a response, feel free to probe a little with questions like: "Do you feel the number of openings is higher?", "Are you trying to think of a specific number?", "Maybe you could say how many times smaller or larger, or what percentage change." Then interviewee is to enter specific number.

10. After completing estimates of job openings ask respondent to indicate the entry requirements for each occupation for which he/she provided an estimate of 1976 job openings.

11. Introduce respondent to Part B and review instructions. Lead them to indicate response as requested. Some probing questions might lead them along.

12. Be patient with respondent and make him/her feel that what they say is important to you. Do not share your opinion or make a suggestion about an employment trend, or evaluate respondents opinion.

13. If respondent feels that another person is better qualified to give an estimate of 1976 job openings, try to get responses from both individuals and note who suggested second respondent on each of their questionnaires. This sometimes happens when there is a new association executive who thinks an established businessman is better tuned to employment trends of that industry.

14. Upon completion, express sincere thanks on behalf of Dr. Brooks, teachers, students, and the Metro Board of Education for their time and information.

GETTING READY FOR INTERVIEW

1. Be familiar with the questionnaire.

2. Fill in your name, date, and as much information as possible on the first page of form prior to interview.

3. Prepare a tentative itinerary for visiting your units so that the greatest number of visits can be fitted into your activities.

4. Carry some pencils (no. 2 or no. 3) which are sharpened as well as some extra paper.

5. Use your business card for introduction purposes if available and desired.

NASHVILLE AREA AGENCIES/ORGANIZATIONS
FOR EMPLOYMENT NEEDS SURVEY

I. General Listing

1. Tennessee Manufacturing Association
2. Personnel Office, Director, State of Tennessee
3. Chamber of Commerce, President
4. Retail Merchants Association
5. Tennesseean, Publisher
6. Banner, Publisher
7. Tennessee Women in Construction, President
8. Metropolitan Airport Authority
9. Avex Corporation, General Aviation
10. Tennessee Aviation Authority
11. Tennessee Society of Air Conditioning and Refrigeration Engineers
12. One Major Air-Conditioning and Heating Company
13. Big Brothers Aircraft
14. National Data Processing Association
15. Vanderbilt Hospital
16. Metro Health Department
17. Tennessee Licensed Practical Nurses Association
18. Tennessee Hospital Association
19. Local Dental Association, President
20. Metro Development and Housing Agency
21. Metro Board of Parks and Recreation
22. Nashville Chapter, National Secretaries Association, Inc., President

23. National Collegiate Association Secretaries, President
24. Executive Secretaries, Inc., President
25. Opryland, Bob Whitaker, Personnel Director
26. Two Office Machine Suppliers (e.g., IBM Sales Office)
27. Ferro Enamel Manufacturing
28. Bennett Tool & Die Company
29. Fred D. Wright Machine Company
30. AVCO Manufacturing
31. Two Major Radio and TV Repair Shops
32. Nashville Labor Unions - Plumbers & Pipefitters
33. Nashville Labor Unions - Ironworkers
34. Nashville Labor Unions - Milwrights
35. Nashville Labor Unions - Carpenters
36. Nashville Labor Unions - Sheet Metal Workers
37. Nashville Labor Unions - Bricklayers
38. Nashville Labor Unions - Tool & Die
39. Nashville Labor Unions - Welders
40. National Tool & Die Association
41. Nashville Home Builders Association
42. Associated Builders & Contractors - Nashville
43. Western Electric
44. Nashville Electric Service
45. South Central Bell Telephone Company
46. Nashville Bar Service
47. Davidson County Soil Conservation Service
48. Geny's Florist & Nursery, Central Office

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49. Davidson County Farm Bureau
50. Davidson County Farmers Co-op
51. Tennessee Livestock Producers Association
52. Feed Manufacturers Association, Tennessee
53. Neuhoff Packing Company
54. Dairy Products Association, Tennessee
55. Building Material Association, Tennessee
56. Consumer Finance Association, Tennessee
57. Hardware Association, Tennessee Retail
58. Hotel & Motel Association, Nashville
59. Regency-Hyatt, Director Personnel
60. Sheraton Downtown, George Clark, Owner
61. Manufacturers Association, Tennessee
62. Merchants Association, Tennessee Retail
63. Restaurant Association, Tennessee, Chris Ogles
64. Shoney's Area Wide Office, Director of Personnel
65. Belle Meade Buffet, Dave Kendall, Owner of Buffet Chain
66. Road Builders Association, Tennessee
67. Savings and Loan League, Tennessee
68. Apartment Owners Association, Nashville
69. Contractors Association, Nashville
70. Billboard Magazine, Bill Williams
71. Country Music Association
72. Capitol Records, Frank Jones
73. Florists, Middle Tennessee, Professional
74. Homebuilders Association, Nashville

75. Home Furnishings Association

76. Mechanical Contractors Association

77. Baird-Ward Printing Company

78. Sunday School Board, Southern Baptist Convention

79. WSM

II. Metro Advisory Committee for Vocational Education

80.	Felix Knight	Davidson County Agriculture Extension Leader 701 Jefferson Street
	747-4568	Nashville, Tennessee 37208
81.	Ernest Hardison	President, Ernest Hardison Seed Company P. O. Box 1072
	256-2659	Nashville, Tennessee 37202
82.	Mrs. William (Lou) McHugh	Assistant Secretary - Personnel National Life & Accident Insurance Co. National Life Center
	749-1372	Nashville, Tennessee 37250
83.	William J. Wade, Jr.	Vice President, Third National Bank P. O. Box 76
	748-4779	Nashville, Tennessee 37202
86.	T. Scott Fillebrown	President, Nashville Area Chamber President, First American National Bank First American Center
	748-2391	Nashville, Tennessee 37237
87.	Marshall Stewart	Executive Director, Mid Cumberland Economic Development District 226 Capitol Building, Suite 801
	224-1212	Nashville, Tennessee 37219
88.	Randall Yearwood	Chairman, Education Committee Nashville Area Chamber of Commerce; and President, Yearwood & Johnson, Architect 911 17th Avenue, South
	244-8950	Nashville, Tennessee 37212
89.	Mrs. Virginia Caldwell	Metropolitan Nashville Manager Tennessee Employment Security, State of Tennessee 301 James Robertson Parkway
	242-2551	Nashville, Tennessee 37201

90.	H. S. Moss	Mayor, Goodlettsville, Tennessee 301 Roscoe Street
	859-1326	Goodlettsville, Tennessee 37072
91.	Robert Norris	Executive Director, Mid-Cumberland Comprehensive Health Planning Council 100 Oaks
	383-2011	Nashville, Tennessee 37204
92.	Miss Ivola Dement	Davidson County Extension Agent 701 Jefferson Street
	747-4568	Nashville, Tennessee 37208
93.	George G. Barbee	Vice President, Economic Development Nashville Area Chamber of Commerce 161 4th Avenue, North
	259-3900	Nashville, Tennessee 37219
94.	Robert Hoffman	Manager of Industrial Relations Ford Glass Plant P. O. Box 1355
	385-1123	Nashville, Tennessee 37202
95.	William Walker	Director, Nashville Electrical Joint Apprenticeship Training Committee Room 215, 631 North 1st Street
	256-4493	Nashville, Tennessee 37207
96.	Frank Bogle	Area Representative, Human Resources Development Institute, AF of L, CIO Room 108, 631 North 1st Street
	256-3520	Nashville, Tennessee 37207
97.	James P. Newman	Executive Vice President, Mid State Steel President, Sales and Marketing Executives of Nashville P. O. Box 1265
	254-1311	Nashville, Tennessee 37202
98.	Robert Churchwell	Reporter, Nashville Banner 1100 Broadway
	255-5401	Nashville, Tennessee 37202
99.	Bill Jay	Vice President and Director of Operations, WLAC James Robertson Parkway
	244-5000	Nashville, Tennessee 37219

III. Other Key Persons/Agencies

100.	Albert Werthan President 259-9331	Werthan Industries, Inc. (Werthan Bag) 404 James Robertson Parkway
101.	C. R. Dorrier, Chairman Metro Board of Education 847-2089	DuPont De Nemours E I & Co. 806 Riverside Drive
102.	Allen Steel, President 254-1511	Life & Casualty Insurance Co. L & C Tower
103.	W. Maxey Jarman, Retired 292-3380	(GENESCO) 4410 Gerald Place
104.	Dr. Lloyd Elam President 327-6200	Meharry Medical College 1005 18th Avenue, N.
105.	Alfred Galloway President & Manager 329-0858	Community Federal Public Broadcasting Company 2701 Jefferson Street
106.	Dan May, Retired from May Hosiery Mills 383-7277	3427 Woodmont Blvd.
107.	Urban Observatory	

Metropolitan Public Schools
2601 BRANSFORD AVENUE
NASHVILLE, TENN. 37204

March 13, 1975

Dear Metro Vocational Teacher:

As you perhaps know, the Metro Board of Education has requested the Center for Vocational Education, the Ohio State University to make a survey of employment needs in the Metro area. This information is to be used in identifying the Vocational Education programs to be offered in each of the comprehensive high schools.

Dr. Brooks and the administration of the schools want to get your opinion about (1) employment openings in the area and (2) entry requirements for each occupation with which you are generally familiar. You are requested to share your opinions by completing the enclosed questionnaire. (This questionnaire is being completed by over 100 leaders in the business community on an interview basis.)

On the front page of the questionnaire enter - under "company, firm, organization or agency:" - the following information -

A. Name of Company (Name of your school)

B. Person Interviewer (Your Name)

C. Title (Your title and occupational area)

D. Phone Number (Your Office Number)

Read the instructions to Part A - including assumption - and indicate your opinions as requested. Read instructions to Part B and indicate your opinions. Be sure to note on the back page, other occupations not listed which you think have employment openings and which might be considered by the Metro Public Schools for new programs.

Your response is needed promptly. Please complete the questionnaire and return to me in the enclosed envelope by Wednesday, March 19, 1975.

Sincerely,

Ernest C. Miller

E. C. Miller, Director
Vocational Education

ECM:fd

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EXHIBIT 2

Background Data From

Nashville Area Employment Demand Survey for 1976

- Table A. Summary of Responses by Community/Business Leaders to Survey of 1976 Job Openings
- Table B. Summary of Responses by Vocational Teachers to Survey of 1976 Job Openings
- Table C. Estimates of Job Openings for Selected Occupations by Community Leaders
- Table D. Estimates of Job Openings for Selected Occupations by Vocational Teachers
- Comments by Teachers (as noted on questionnaires)
- Comments by Community Leaders (as noted on questionnaires)
- Table E. Employment by Industry for the Nashville SMSA
- Table F. Human Services Professionals Cluster Employment Projections by Interim Manpower Projections Program
- Table G. Medical Professional Cluster Employment Projections by Interim Manpower Projections Program
- Table H. Applied Physical Sciences Cluster Employment Projections by Interim Manpower Projections Program
- Table I. Physical Sciences Professionals Cluster Employment Projections by Interim Manpower Projections Program
- Table J. Sales Occupations Cluster Employment Projections by Interim Manpower Projections Program

TABLE A

SUMMARY OF RESPONSES BY COMMUNITY/BUSINESS LEADERS TO SURVEY OF 1976 JOB OPENINGS

Occupations	Bureau of Labor Statistics			Summary of Respondent's Estimates of Job Openings				
	Total Employment	Total Job Openings	Job Openings % of Total	Average	% of Total Employment	Median	Range of Scores	Number of Responses
Example:								
Janitor								
Cosmetologist								
1. Health Serviceworkers								
Dental Assistants	256	23	9.0	30.2	11.8	23	12- 50	14
Practical Nurses	1,299	124	9.5	178.3	13.7	124	50-400	15
Nurse aides, Orderlies	2,462	181	7.4	228.6	9.3	200	50-400	14
Health Aides	665	63	9.5	76.7	11.5	63	50-150	12

$x^2 = 41.529$, df = 3, $p < .001$

2. Publishing Industry								
Compositors & Typesetters	801	29	3.6	36.6	4.6	29	15-100	11
Photoengravers, Lithographers	267	14	5.2	18.1	6.8	14	0- 50	10
Pressmen & Plate Printers	920	36	3.9	42.3	4.6	36	15-100	12
Editors & Reporters	946	73	7.7	72.8	7.7	73	12-150	12

$x^2 = 4.295$, df = 3, $p < .30$ not significant

202/203

Occupations	Bureau of Labor Statistics: Total Employment	Total Job Openings	Job Openings % of Total	Summary of Respondent's Estimates of Job Openings: Average	% of Total Employment	Median	Range of Scores	Number of Responses
3. Clerical Occupations								
Bank Tellers	632	50	7.9	63.0	10.0	50	50-120	15
Bookkeepers	5,420	433	8.0	415.3	7.7	433	200-560	29
Cashiers	3,042	257	8.4	293.6	9.7	257	257-500	17
Clerks, payroll, shipping, etc.	3,260	229	7.0	287.9	8.8	229	122-652	23
Keypunch Operators	1,058	60	5.7	91.1	8.6	67.5	40-211	28
Medical Secretaries	226	22	9.7	36.3	16.1	22	22-100	16
Secretaries	10,849	1,049	9.7	1,119.9	10.3	1,049	500-3,000	40
Typists	2,979	289	9.7	351	11.8	289	150-1,500	41
Receptionists	1,289	110	8.5	149.9	11.6	110	50-1,000	29

$x^2 = 82.44624$, df = 8, $p < .001$

4. Construction & Metalworking Craftsmen								
Brickmasons & Stonemasons	989	44	4.4	60.5	6.1	50	44- 88	21
Carpenters	2,443	132	5.4	168.1	6.9	150	40-300	28
Electricians	1,696	90	5.3	98.2	5.8	90	30-180	25
Painters	1,198	46	3.8	55.2	4.6	46	20-100	20
Plumbers & Pipe Fitters	1,452	81	5.6	115.5	8.0	100	30-375	22

204/265

Occupations	Bureau of Labor Statistics: Total Employment	Total Job Openings	Job Openings % of Total	Summary of Respondent's Estimates of Job Openings: Average	% of Total Employment	Median	Range of Scores	Number of Responses
Welders	1,576	81	5.1	87.8	5.6	81	30-181	23
Machinists	999	54	5.4	75.4	7.5	65	54-108	19
Tool & Die Makers	586	25	4.3	34.3	5.9	25	20- 75	18

$x^2 = 45.853$, df = 7, $p < .001$

5. Mechanics, Repairmen & Installers								
Aircraft	518	36	6.9	57.9	11.2	50.5	20-100	10
Appliance	474	23	4.9	47.5	10.0	40	23-150	13
Auto	2,601	88	3.4	142.5	5.5	100	50-260	17
Auto Body Repair	231	4	1.7	50	21.6	23.5	4-231	22
Auto Service Station Attendant	1,335	51	3.8	60.4	4.5	51	20-150	12
Office Machine	121	4	3.3	23.4	19.3	20	4-100	16
Diesel & Heavy Equipment	1,610	73	4.5	110.3	6.9	100	73-200	10
Refrigeration & Air Conditioning	539	37	6.9	57.1	10.6	50	37-150	20
Radio & TV Repairmen	476	15	3.2	30.9	6.5	25	15- 50	13
Telephone Installers & Repairmen	975	34	3.5	50.1	5.1	37	15- 97	8

$x^2 = 752.451$, df = 9, $p < .001$

6. Hospitality Industry								
Busboys, Dishwashers	561	34	6.1	63.8	11.4	37	20-150	16
Cooks, Chefs	2,569	199	7.7	216	8.4	199	50-514	15
Housekeepers	719	55	7.6	72.9	10.1	55	20-150	13
Janitors & Sextons	3,530	245	6.9	292.7	8.3	300	245-706	17
Waiters, Waitresses	2,986	250	8.4	260.8	8.7	250	200-597	16
Meat Cutters & Wrappers	942	34	3.6	47.4	5.0	34	20-100	10
Recreation & Amusement Attendants	149	8	5.4	78.5	52.7	50	8-400	11

$x^2 = 669.712$, df = 6, $p < .001$

206/207

Occupations	Bureau of Labor Statistics: Total Employment	Total Job Openings	Job Openings % of Total	Summary of Respondent's Estimates of Job Openings: Average	% of Total Employment	Median	Range of Scores	Number of Responses
7. Human Services								
Barbers	633	40	6.4	35.6	5.6	40	20- 40	9
Cosmetologists	1,964	177	9.0	182.8	9.3	177	100-300	9
Child Care Workers	601	91	15.1	104.5	17.4	91	40-200	10
Library Attendants, Assistants	401	35	8.7	49.3	12.3	35	35-100	7
Teacher Aides	414	44	10.6	49.3	11.9	44	25-100	7

$x^2 = 9.158$, df = 4, $p < .10$, not significant

8. Other								
Air Traffic Controllers	46	1	2.2	5	10.9	7.5	4- 11	4
Animal Caretakers, except farm	117	4	3.4	10	8.5	10	4- 18	11
Groundskeepers, gardeners, except farm	682	27	4.0	43.7	6.4	30	20-150	19
Farmers	1,257	28	2.2	42.6	3.4	28	28-100	14
Computer programmers	505	28	5.5	44.6	8.8	40	14-100	18
Delivery & Routemen	2,163	93	4.3	121.9	5.6	93	50-216	19
Truck Drivers	5,384	185	3.4	208.5	3.9	185	85-400	17
Photographers	220	13	5.9	18.2	8.3	13	6- 44	11
Retail Salespersons	9,300	744	8.0	680.5	7.3	744	150-1,116	17
Sewers and Stitchers	2,997	237	7.9	271.6	9.1	237	235-350	5

$x^2 = 77.3$, df = 9, $p < .001$

208/209

TABLE 5

SUMMARY OF RESPONSES BY VOCATIONAL TEACHERS
TO SURVEY OF 1976 JOB OPENINGS

Occupations	Bureau of Labor Statistics			Summary of Respondent's Estimates of Job Openings				
	Total Employment	Total Job Openings	Job Openings % of Total	Average	% of Total Employment	Median	Range of Scores	Number of Responses
Example:								
Janitor								
Cosmetologist								
1. Health Services								
Dental Assistants	256	23	9.0	34	13.3	23	15-100	6
Practical Nurses	1,299	124	9.5	183	14.1	137	100-200	6
Nurse aides, Orderlies	2,462	181	7.4	202	8.2	190.5	150-300	6
Health Aides	665	63	9.5	93.2	14.0	70	63-170	5

$x^2 = 50.246$, df = 3, $p < .001$

2. Publishing Industry								
Compositors & Typesetters	801	29	3.6	31.6	3.9	29	6-90	6
Photoengravers, Lithographers	267	14	5.2	22.5	8.4	26.5	10-30	6
Pressmen & Plate Printers	920	36	3.9	59.6	6.5	61	30-98	6
Editors & Reporters	946	73	7.7	71.5	7.6	73	50-[illegible]0	4

$x^2 = 20.896$, df = 3, $p < .001$

210/211

Occupations	Bureau of Labor Statistics: Total Employment	Total Job Openings	Job Openings % of Total	Summary of Respondent's Estimates of Job Openings: Average	% of Total Employment	Median	Range of Scores	Number of Responses
3. Clerical Occupations								
Bank Tellers	632	50	7.9	53.1	8.4	50	30-70	8
Bookkeepers	5,420	433	8.0	433.1	8.0	433	350-550	7
Cashiers	3,042	257	8.4	258.4	8.5	257	225-300	8
Clerks, payroll, shipping, etc.	3,260	229	7.0	245.1	7.5	229	200-300	7
Keypunch Operators	1,058	60	5.7	79.4	7.5	60	50-150	8
Medical Secretaries	226	22	9.7					
Secretaries	10,849	1,049	9.7	1199.4	11.1	1049	900-2100	7
Typists	2,979	289	9.7	305.6	10.3	289	200-500	8
Receptionists	1,289	110	8.5	131.3	10.0	110	80-300	8

2/2/ 2/3

$x^2 = 34.246$, df = 7, $p < .001$

4. Construction & Metalworking Craftsmen								
Brickmasons & Stonemasons	989	44	4.4	74.5	7.5	44	30-300	11
Carpenters	2,443	132	5.4	168.6	6.9	132	60-500	11
Electricians	1,696	90	5.3	87.2	5.1	90	60-100	9
Painters	1,198	46	3.8	58.4	4.9	46	30-100	10
Plumbers & Pipe Fitters	1,452	81	5.6	81.9	5.6	81	65-100	9

Occupations	Bureau of Labor Statistics			Summary of Respondent's Estimates of Job Openings				
	Total Employment	Total Job Openings	Job Openings % of Total	Average	% of Total Employment	Median	Range of Scores	Number of Responses
Welders	1,576	81	5.5	98.7	6.3	81	70-200	9
Machinists	999	54	5.4	67.7	6.8	54	40-150	9
Tool & Die Makers	586	25	5.3	31.25	5.3	25	15-50	8

$x^2 = 43.636$, df= 7, p .001

5. Mechanics, Repairmen & Installers								
Aircraft	518	36	6.9	38.6	7.5	36	30-60	7
Appliance	474	23	4.9	34	7.2	34	23-50	8
Auto	2,601	88	3.4	79.9	3.11	88	70-180	9
Auto Body Repair	231	4	1.7	22.7	9.8	10	4-120	11
Auto Service Station Attendant	1,335	51	3.8	65	4.9	51	40-130	11
Office Machine	121	4	3.3	7	5.8	4	4-20	7
Diesel & Heavy Equipment	1,610	73	4.5	85.1	5.3	73	60-180	10
Refrigeration & Air Conditioning	539	37	6.9	53.3	9.9	50	37-100	11
Radio & TV Repairmen	476	15	3.2	46.3	9.7	17.5	15-200	10
Telephone Installers & Repairmen	975	34	3.5	42	4.3	34	34-100	9

$x^2 = 176.091$, df = 7, p < .001

6. Hospitality Industry								
Busboys, Dishwashers	561	34	6.1	44.9	8.0	34	34-75	7
Cooks, Chefs	2,569	199	7.7	210.7	8.2	199	130-350	7
Housekeepers	719	55	7.6	60.7	8.44	55	25-100	7
Janitors & Sextons	3,530	245	6.9	248.3	7.03	245	210-300	6
Waiters, Waitresses	2,986	250	8.5	271.9	9.1	250	200-400	8
Meat Cutters & Wrappers	942	34	5.6	34.4	3.7	34	25-50	8
Recreation & Amusement Attendants	149	8	5.4	32.1	2.15	17.5	8-150	8

$x^2 = 255.433$. df = 6, p < .001

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Occupations	Bureau of Labor Statistics: Total Employment	Total Job Openings	Job Openings % of Total	Summary of Respondent's Estimates of Job Openings: Average	% of Total Employment	Median	Range of Scores	Number of Responses
7. Human Services								
Barbers	633	40	6.3	36.4	5.8	40	15-70	7
Cosmetologists	1,964	177	9.0	201	10.2	177	150-400	8
Child Care Workers	601	91	1.51	96.3	1.6	91	80-150	9
Library Attendants, Assistants	401	35	8.7	43.6	10.9	35	20-75	7
Teacher Aides	414	44	10.6	46.25	11.2	44	30-80	8

$x^2 = 6.115$, df = 4, $p < .20$, not significant

8. Other								
Air Traffic Controllers	46	1	2.2	2.5	5.4	1	1-10	6
Animal Caretakers, except farm	117	4	3.4	5.9	5.0	4	3-12	7
Groundskeepers, gardeners, except farm	682	27	4.0	26.9	3.9	27	15-50	7
Farmers	1,257	28	2.2	32	2.5	28	20-50	7
Computer programmers	505	28	5.54	37.4	7.4	28	20-70	7
Delivery & Routemen	2,163	93	4.3	103.7	4.8		75-175	6
Truck Drivers	5,384	185	3.4	191.7	3.6	185	150-260	6
Photographers	220	13	5.9	14.5	6.6	13	10-25	6
Retail Salespersons	9,300	744	8.0	680.3	7.3	744	500-850	6
Sewers and Stitchers	2,997	237	7.9	234.5	7.8	235	200-300	6

$x^2 = 14.007$ df = 9 $p < .20$ not significant

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TABLE C

ESTIMATES OF JOB OPENINGS FOR SELECTED OCCUPATIONS*
BY COMMUNITY LEADERS

Occupations	Summary of Responses			
	Average	Median	Range of Estimates	No. of Responses
1. Outdoor vehicles and equipment mechanics	54	50.0	10-110	14
2. Building maintenance repairmen	71	50.0	5-250	17
3. Institutional, home aides	344	150.0	50-1100	8
4. Ambulance drivers, attendants	43	25.0	6-200	11
5. Graphic artists	13	7.5	5-50	6
6. Horticultural assistants	46	25.0	5-240	9
7. Room/front desk clerks	17	10.0	6-50	7

*Not identified in Interim Manpower Projection Program

TABLE D

ESTIMATES OF JOB OPENINGS FOR SELECTED OCCUPATIONS*
BY VOCATIONAL TEACHERS

Occupations	Summary of Responses			
	Average	Median	Range of Estimates	No. of Responses
1. Outdoor vehicle and equipment mechanics	47	50.0	15-75	9
2. Building maintenance repairmen	74	57.5	29-150	10
3. Institutional, home aides	54	50.0	12-75	5
4. Ambulance drivers, attendants	22	20.0	12-39	5
5. Graphic artists	22	15.0	12-30	7
6. Horticultural assistants	33	38.0	16-50	5
7. Room/front desk clerks	42	30.0	20-100	5

*Not identified in Interim Manpower Projection Program

COMMENTS
BY
TEACHERS

Institutional, Home Aides ..... rapidly expanding.

Ambulance Drivers, Attendants ..... rapidly expanding.

Computer Operators and Unit Record Equipment Operator ..... Operate various data processing equipment including feeding in information, and actually operating computer. Estimate 1976 job openings: 25.

Draftsmen ..... Machine and Architectural, Design and Sheet Metal Layout, etc., Estimate 1976 job openings: 50.

Drafting ..... to develop the ideas and rough sketches of the engineer and/or architect into working drawings. Estimate 1976 job openings: 125.

Commercial Art ..... most types of commercial art are used for presentation or reproduction. They include illustration, layout, lettering, design, product advertising, keylining and others. Estimate 1976 job openings: 30.

Mass Transport ..... architects, designers, binders, maintenance, service personnel and supervisory. Estimate 1976 job openings: recognition in 1976.

Heavy Freight Hauling ..... (same as above).

Small Print Shops are not listed, 300 are not publishers.

Aircraft Line Man.....Park and service aircraft with fuel, oil, oxygen, hydraulic fluid, etc. Assist pilot with transportation and information on local area. Estimate 1976 job openings: 15.

Sheet Metal Workers ..... layout and fabricate items made of sheet metal. Ex. heating and ventilating ducts, metal roofing, flashing, etc. Estimate 1976 job openings: 50.

Machine Tool Operators ..... be able to operate one or more machine tools--set up work--read prints. Estimate 1976 job openings: 50.

Draftsmen ..... architectural, mechanical, engineering, machine. Estimate 1976 job openings: 150.

COMMENTS
BY
COMMUNITY LEADERS

15% increase in publishing industry as a whole.

Mr. Tune bases his estimates on knowledge of new business and expansion in area. He declined to comment on entry requirements. 10% means an increase of

Communications technician--no specific training available in area.

Aircraft lineman (fueling, servicing, security, directs aircraft) 100

Avionics installers & technician (install, service & repair) 15

There are definitely more need for comp. high schools.

Construction labor workers -- shopwork and basic electricity should be taken in high school as background. 1500

Construction Helper -- This person would be trained on the job with on the job training. 1500

Telephone operators--need high school education, will be trained on the job. 250

Note: Minimum wage forcing cuts in retail salesperson openings, especially in small stores such as Mr. Burrus owns. Many stores being forced to "self-service."

Note: Some projections from Dodge Report
*Need 375 for 1 job in Columbia Tennessee (train here)

TABLE E

EMPLOYMENT BY INDUSTRY FOR THE NASHVILLE SMSA*

Industry	Census 1970	Projections 1980	Projections 1990	Percent Change 1970-80	Percent Change 1980-90
Agriculture, Forestry and Fishing	8,591	6,171	5,303	-39.2	-16.3
Mining	426	523	565	22.7	8.0
Construction	20,161	24,034	26,238	19.2	9.2
Furniture, Wood Products	4,727	5,128	5,278	8.5	2.9
Primary Metal Industry	878	1,089	1,217	24.0	11.8
Fabricating Metal Industry	4,167	4,521	4,657	8.5	3.0
Machinery, Excluding Electrical	2,467	3,416	4,088	38.5	19.7
Electrical Machinery	3,922	4,887	5,486	24.6	12.3
Motor Vechicles and Other	6,941	9,902	12,011	42.7	21.3
Other Durable Goods	7,175	8,316	8,974	15.9	7.9
Food and Kindred	4,532	3,979	3,736	-13.9	- 6.5
Textiles and Apparels	10,136	10,459	10,509	3.2	0.6
Printing and Publishing	8,176	8,480	8,628	3.7	1.7
Chemicals	4,423	4,669	4,818	5.6	3.2
Other Non-Durable	11,232	14,212	18,979	26.6	33.5
Railroad and Express	1,760	1,991	2,121	13.1	6.5
Truck and Warehouse	5,233	6,919	8,002	32.2	15.7
Other Transportation	2,810	3,737	4,287	33.0	14.7
Communication	4,452	5,324	5,649	19.6	6.1
Utility and Sanitation	5,095	7,747	9,226	52.0	19.1
Wholesale Trade	13,947	19,893	24,057	42.6	20.9
Food, Bakery and Dairy	6,779	7,786	8,346	14.9	7.2
General Merchandise	7,895	10,556	12,244	33.7	16.0

TABLE E (continued)

EMPLOYMENT BY INDUSTRY FOR THE NASHVILLE SMSA*

Industry	Census 1970	Projections 1980	Projections 1990	Percent Change 1970-80	Percent Change 1980-90
Eat and Drink	6,530	7,242	7,409	11.0	2.3
Other Retail	20,779	28,048	32,384	35.0	15.5
Fire	16,363	21,808	25,383	33.3	16.4
Business Services	4,000	6,984	8,941	74.6	28.0
Repair Services	3,888	5,541	6,674	42.5	20.4
Other Personal Services	15,842	17,153	17,815	8.3	0.4
Entertainment and Recreation	2,307	3,138	3,686	36.0	17.5
Hospital and Other	18,373	27,033	33,258	47.1	23.0
Educational Services	22,311	31,104	37,006	39.4	19.0
Welfare and Related Non-Profit	5,380	7,414	8,802	37.8	18.7
Other Professionals	5,436	10,571	15,551	94.5	47.1
Public Advertising	12,970	14,808	15,841	14.2	7.0
TOTALS	280,104	356,021	407,928	27.1	14.6

* Projections reported in this table are the results of a simulation system with varied input regarding basic assumptions. This particular set of projections have a given set of assumptions concerning fertility, mortality and migration. For a complete list of specific assumptions and procedure see Engels, Richard A. and Annie Moore, Tennessee Migration, Population, Families, Income, and Manpower Demand Projections to 1990 for Development Districts and Counties. Nashville, Tennessee State Planning Office, State Planning Division, July, 1974. The Table presented here is computed from tables presented in the above cited report.

TABLE F

HUMAN SERVICES PROFESSIONAL CLUSTER EMPLOYMENT PROJECTION
BY INTERIM MANPOWER PROJECTION PROGRAM

Occupations	Annual Job Openings 1976-1980	Employ-ment 1976	Employ-ment 1980
Lawyers	46	850	932
Social worker	61	760	844
Clergymen	56	985	1,097
Psychologists	12	163	201
Home management advisors	1	20	20
Vocational education counselors	34	397	475
Teachers, pre-school through university, public and private	696	10,080	11,028
Accountants	134	2,544	2,804
Airplane pilots	7	195	221
TOTAL	1,047	15,994	17,622

TABLE G

MEDICAL PROFESSIONS CLUSTER EMPLOYMENT PROJECTIONS

BY INTERIM MANPOWER PROJECTIONS PROGRAM

Occupations	Annual Job Openings 1976-1980	Employment 1976	Employment 1980
Dentists	7	181	194
Dietitions	17	225	246
Optometrists	2	54	59
Pharmacists	19	366	402
Physicians and osteopaths	40	1,182	1,224
Registered nurses	286	3,412	3,758
Therapists	25	331	387
Veterinarians	2	50	58
TOTAL	398	5,801	6,328

TABLE H

APPLIED PHYSICAL SCIENCES CLUSTER EMPLOYMENT PROJECTIONS

BY INTERIM MANPOWER PROJECTIONS PROGRAM

Occupations	Annual Job Openings 1976-1980	Employment 1976	Employment 1980
Computer programmers* C.L.	44	505	565
Engineers, aero-astronauts	12	172	222
Engineers, chemical	8	234	260
Engineers, civil	42	894	988
Engineers, electrical	29	582	670
Engineers, industrial	30	590	685
Engineers, mechanical	23	432	507
Architects	11	203	231
	199	3,612	4,128

*Computer programmers job openings (44) is the average estimate from community leaders survey.

TABLE I

PHYSICAL SCIENCE PROFESSIONALS CLUSTER EMPLOYMENT PROJECTIONS

BY INTERIM MANPOWER PROJECTIONS PROGRAM

Occupations	Annual Job Openings 1976-1980	Employ-ment 1976	Employ-ment 1980
Chemists	9	202	228
Geologists	0	31	33
Marine scientists	0	5	6
Physicists astronomers	0	16	18
Biological scientist	6	134	145
Atmospheric, space scientist	0	26	30
Foresters, conservationists	4	79	90
	19	493	550

TABLE J

SALES OCCUPATIONS CLUSTER EMPLOYMENT PROJECTIONS

BY INTERIM MANPOWER PROJECTIONS PROGRAM

Occupations	Annual Job Openings 1976-1980	Employment 1976	Employment 1980
Insurance agents, brokers, etc.	105	1,984	2,235
Real estate agents, brokers	86	1,131	1,265
Stock and bond salesmen	11	246	267
Sales representative, wholesale	204	3,736	4,258
Sales representative, manufacturing	102	2,006	2,249
Retail salespersons*	643*	9,300	10,463
Salesmen, service and construction	60	920	1,033
TOTAL	1,211	19,323	21,771

*Retail salespersons job openings (643) is the average estimate from community leaders survey. Agricultural salespersons (188) identified from agricultural survey are believed to be included in this figure as all were retail sales positions.

EXHIBIT 3

Agricultural Survey

- Questionnaire titled "Agricultural Occupations Other Than Farming in Davidson County"
- Guidelines for Interviewing Agricultural Employers/ Agencies
- Description of Agricultural Occupations
- Comments by Respondents of Agricultural Survey

Interviewer _____

Date of Interview _____

AGRICULTURAL OCCUPATIONS OTHER THAN FARMING IN DAVIDSON COUNTY
Interview Schedule - Form 1

I. Company, Firm, Organization or Agency

A. Name of Company _____

B. Person Interviewed _____

C. Main agricultural function of company, organization, or agency.

____ 1. Sales (retail or wholesale)
____ 2. Services
____ 3. Purchasing
____ 4. Manufacturing
____ 5. Processing
____ 6. Specialized agriculture (hatchery, greenhouse, etc.)
____ 7. Recreational enterprise
____ 8. Other (specify)

D. Describe the major agricultural products, services, etc. of organization.

_____

_____

_____

II. Employees--Total number in this business _____
List on page 2 by job title, those employees needing agricultural competencies. (An agricultural competency is defined as a knowledge of, and/or a skill, and/or an ability in one or more of the basic areas of plant and soil science, animal and poultry science, agricultural business management, marketing, and agricultural mechanics.)

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Job Title	Other jobs performed (List Numbers)	Number of Employees: Current Full-time	Current Part-time	In 1976 Full-time	In 1976 Part-time
1. Commodity grader (Specify) _____					
2. Farm equipment mechanic					
3. Florist					
4. Florist assistant					
5. Greenhouse attendant					
6. Greenskeeper					
7. Landscaper					
8. Landscape attendant					
9. Lawn and garden equipment mechanic					
10. Naturalist					
11. Nurseryman					
12. Salesperson- equipment, hand tools, feed, seed fertilizers, and related items					
13. Salesperson- flowers, plants, shrubs, and related items					
14. Small animal caretaker					
15. Tree service worker					
16. Veterinarian assistant					
Other job titles:					
17. _____					
18. _____					
19. _____					
20. _____					

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GUIDELINES FOR INTERVIEWING AGRICULTURAL EMPLOYERS/AGENCIES

1. Make appointment by phone, or drop in as you deem appropriate.

2. Gain entry: Be prepared for the following questions:

WHY ARE YOU HERE?	I am representing Metro public schools which needs to know employment trends. The purpose of the information is to help determine the vocational programs that should be offered in the high schools of Nashville Davidson County.
WHY SHOULD I GIVE YOU THE DATA?	(1) To better utilize your tax dollars in planning the most appropriate educational programs. (2) To provide guidance to students as to which occupations truly offer employment opportunities. (3) To help the public schools more accurately serve the needs of the community.

3. Obtain the name of the person interviewed.

4. Determine the main agricultural function of the company and describe the major agricultural products, services, etc.

5. Identify the total of employees in business as of March 1, 1975.

6. Turn to page 2 and complete questionnaire as follows:

   (a) If a person, or group of persons performs duties covered by more than one job title, list number of job titles under other jobs performed.

   (b) Number of employees for 1976 shown include normal and expected turnover and growth.

7. Assumptions to guide the 1976 estimates are:

   (a) Geographical area is Davidson County.

   (b) Economic conditions will not further deteriorate.

   (c) Plans for anticipated operations and growth, if any, will occur as scheduled.

Descriptions of Agricultural Occupations

1. Commodity grader: inspects agricultural products and specifies the grade of the products using established USDA Guidelines.

2. Farm equipment mechanic: repairs and adjusts equipment used in the planting, weed and insect control, harvesting, and handling a variety of agricultural crops.

3. Florist: operates a flowershop involving employee supervision, preparing flower arrangements and potted plants, and other managerial and agricultural tasks.

4. Florist assistant: prepares flower arrangements and potted plants for sale, sells to customers, and other duties as assigned.

5. Greenhouse attendant: cares for plants, including watering, fertilizing, spraying, temperature and light control.

6. Greenskeeper: assists the turf manager of a golf course in watering, fertilizing, spraying for insects and pests, and mowing greens.

7. Landscaper: designs plans for and landscapes homes and other buildings.

8. Landscape attendant: assists landscaper and/or care for an established landscape.

9. Lawn and garden equipment mechanic: repairs and adjusts gas and electrically powered lawn and garden equipment.

10. Naturalist: cares for natural resources such as parks and wooded areas, and provides tours and explanations of nature and its native inhabitants.

11. Nurseryman: operates area denoted to the planting and growing of plants, shrubs and trees for transplanting and selling to individuals or other business such as landscaper.

12. Salesperson: equipment, hand tools, feed, seed, fertilizers and related items.

13. Salesperson: flowers, plants, shrubs, and related items.

14. Small animal caretaker: cares for and grooms small animals in pet centers, veterinarian clinics, grooming shops, research laboratories and department stores.

15. Veterinarian assistant: cares for animals, assists in getting animals into and from laboratory, administers oral medication as prescribed, prepares animals for examination and surgery, and other duties as assigned by veterinarian.

16. Tree service worker: Does pruning, surgery and removal of trees as well as planting, fertilizing, and controling insects and diseases.

COMMENTS BY RESPONDENTS

OF AGRICULTURAL SURVEY

Mr. Davis feels an Animal Health course should be taught in high school.

Dr. Mobley thinks that students completing work in various lab skills--(autoclave, blood exams, nutrition, etc.) have good opportunities. He believes that 10-13 students per year will be needed in Metro and Middle Tennessee counties.

Mr. Bracy feels there should be more vocational education in high school and less college.

EXHIBIT 4

Music Industry Survey

- List of 25 Music Industry Leaders Included in Survey
- First Questionnaire titled "Survey of Music and Allied Occupations"
- Second Questionnaire titled "Summary of Job Titles and Estimated Annual Employment Openings for Nashville's Music Industry"

DEPARTMENT OF ECONOMIC AND COMMUNITY DEVELOPMENT
1007 ANDREW JACKSON STATE OFFICE BLDG.
NASHVILLE, TENNESSEE 37219

February 21, 1975

INITIAL MEETING WITH DR. KENNEY GRAY IN CONFERENCE ROOM OF THE COUNTRY MUSIC FOUNDATION HALL OF FAME AND MUSEUM LIBRARY

Mr. Frank Jones, Chairman of the Board
Country Music Foundation
and
Vice President of Capitol Records, Inc.
806 16th Avenue, South
Nashville, Tennessee
Phone: 244-1842

Mr. William (Bill) Denny
Chairman of the Board
Country Music Association,
and
President, Cedarwood Publishers
16th Avenue, South
Nashville, Tennessee
Phone: 297-8494

Mr. Joe Talbot (Former Chairman of the Board
of Country Music Association)
President, Precision Press
Hawkins Street
Nashville, Tennessee
Phone: 244-7954

Mrs. E. J. (Frances) Preston, Trustee
Country Music Foundation
and
Vice President, Broadcast Music Industries
16th Avenue, South
Nashville, Tennessee
Phone: 259-3625

Mrs. Jo Walker, Executive Secretary
Country Music Association
Sigler Street
Nashville, Tennessee
Phone: 244-2840

Mr. Buddy Killen, Vice President
Tree International Publishers
708 17th Avenue, South
Nashville, Tennessee
Phone: 327-3162

Mr. Ed Shea, Regional Executive Director
American Society of Composers, Authors and Publishers
17th Avenue
Nashville, Tennessee
Phone: 244-3936

Mr. Bob Thompson, Executive Director
SESAC
Hawkins Street
Nashville, Tennessee
Phone: 244-1912

Mr. William (Bill) Williams
Southern Editor, Billboard Magazine
West End Avenue (1719)
Nashville, Tennessee
Phone: 329-3925

Mr. Bill Ivey, Executive Director
Country Music Foundation
Country Music Hall of Fame and Museum (16th Ave., S)
Nashville, Tennessee
Phone: 244-2542

Mr. Don Gant, Executive Director
ABC-Dunhill/Dot Records
and
President, National Academy of Recording Artists & Sciences
21st Avenue, South
Nashville, Tennessee
Phone: 385-0840

Mr. George Morgan, President
Association for Country Entertainers
Nashville, Tennessee
Phone: 244-4436

Miss Jan Howard, Officer
Association for Country Entertainers
Nashville, Tennessee
Phone: 356-7016

Mr. Joe Allison (Immediate Past President)
Nashville Song Writers Association
Franklin Road
Nashville, Tennessee
Phone: 383-6039

Mr. Dick Blake, President
Talent Agents Association
c/o Hubert Long Agency
Hawkins Street
Nashville, Tennessee
Phone: 244-9550

Ms. Norma Boyd, Executive Director
Gospel Music Association
817 18th Avenue, South
Nashville, Tennessee
Phone: 327-4434

Ms. Betty Cox, Publisher
Music City News
1314 Pine Street
Nashville, Tennessee
Phone: 244-5187

Ms. Luwayne Satterfield, Managing Editor
Music City News
1314 Pine Street
Nashville, Tennessee
Phone: 244-5187

Mr. William Hudson, President
Bill Hudson & Associates, Inc.
905 16th Avenue, South
Nashville, Tennessee
Phone: 244-8872

Mr. John Hoge, President for Nashville Section of
Audio Engineering Society
Nashville, Tennessee
Phone: 327-4782

Mrs. Alice Kouser, President
Communications Arts Council and
State of Tennessee Education Field Representative
Hume Fogg High School
Nashville, Tennessee
Phone: 297-2628

Mr. Bud Wendell, General Manager
Grand Ole Opry
Opryland
Nashville, Tennessee
Phone: 889-6600

Mrs. W. M. (Tex) (Dorothy) Ritter, Director of Entertainment Industry Relations
Department of Economic & Community Development for the State of Tennessee
Room 1021 Andrew Jackson Building
Nashville, Tennessee
Phone: 741-1094

Mr. George Richey, Vice President
Nashville Division
AVCO Records
Sigler Street
Nashville, Tennessee
Phone: 255-0411

Mrs. Mary Reeves Davis
President
Jim Reeves Enterprises, Inc.
806 17th Avenue, South
Nashville, Tennessee
Phone: 255-0379

SURVEY OF

MUSIC AND ALLIED OCCUPATIONS

NAME _____

TITLE _____

AGENCY/FIRM _____

Please give information in spaces provided on music and allied occupations for which occupational education at the high school level would be helpful in providing entry level employees.

Your requested to list (1) occupational titles and (2) your estimate as to the number of annual employment openings, and (3) a brief description of the primary duties of persons employed in each job.

Assumption that should guide your estimates are that:

1. Job opportunities are confined to the metropolitan area.
2. Growth in Music and Allied fields will materialize as planned.
3. Existing economic conditions will not further decline.

OCCUPATIONAL TITLES	ANNUAL EMPLOYMENT OPENINGS	BRIEF DESCRIPTION OF OCCUPATIONS
EXAMPLE: Licensed Practical Nurse	70	Performs Services in caring for and treating the ill under supervision of Physician or registered nurse.
Welder	240	Joins pieces of metal by placing them next to each other and melting the adjacent surfaces causing them to flow together for a strong bond.
1.		
2.		
3.		

CUPATIONAL TITLES	ANNUAL EMPLOYMENT OPENINGS	BRIEF DESCRIPTION OF OCCUPATIONS

Thank you for your help!

Summary of Job Titles and Estimated
Annual Employment Openings for
Nashville's Music Industry

PART A

INSTRUCTIONS: Please read the list of job titles and estimated employment openings in 1976. For each job title indicate that you "agree" with the estimated employment openings by placing an "X" in "agree" column OR that you "disagree" by entering your estimate in "disagree" column.

Summary

Job Titles	Estimated Employment Openings in 1976	Your Estimate of Openings in 1976	
		Agree (X)	Disagree. My estimate is:
1. Record Press Operators	30		
2. Rock Band Road Musicians	150		
3. Song Writers	500		
4. Managers for Artists	20		
5. Music Secretaries	40		
6. Recording Studio Technicians	5		
7. Song Pluggers	10		
8. TV Proppersons	5		
9. TV Camera Operators	10		
10. Sound Equipment Repairmen	10		

PART B

INSTRUCTIONS: **List any other semi-skilled or skilled level titles and your estimate of openings in 1976.**

Job Titles	Your Estimate of Openings in 1976
11.	
12.	
13.	
14.	
15.	

Thank you.

Please return to: Dr. Kenney E. Gray, Research Specialist, The Center for Vocational Education, The Ohio State University, Columbus, Ohio 43210 -- by no later than Friday, April 18.

EXHIBIT 5

Interest Survey Memoranda, Questionnaires and Answer Sheets

- Memo from Dr. Elbert D. Brooks to All Secondary School Principals
- Memo from Mrs. Dorothy M. Pease to Senior High Counselor Chairmen
- Student Questionnaire and Answer Sheet
- Parent Questionnaire and Answer Sheet

Metropolitan Public Schools

2601 BRANSFORD AVENUE
NASHVILLE, TENN. 37204

ELBERT D. BROOKS
DIRECTOR OF SCHOOLS

MEMO: All Secondary Principals

FROM: Elbert D. Brooks

DATE: February 28, 1975

SUBJECT: Ohio State University Survey of All 11th Graders and Their Parents

Last month the Nashville-Metro Public Schools contracted the services of Ohio State University to assist us in planning for the expansion and improvement of vocational education in our comprehensive high schools. Part of the contract calls for an assessment of the needs and interests of all 11th grade students and their parents regarding the occupational plans of 11th graders. Determination of these needs and interests will provide one important basis for selecting those vocational education programs to be offered in the high schools.

Please impress upon the counselors and teachers in your school the importance of this survey and request their cooperation in conducting it. Mrs. Dorothy Pease will be calling a meeting of Counselor Chairmen for an orientation meeting on Monday afternoon, March 10, to organize for the survey. The 11th graders will be surveyed on Wednesday, March 12, and parents will be surveyed March 12-14, 1975. The survey should take no longer than 20-30 minutes for students and parents to complete.

Also, we would like to obtain your opinions and those of the counselors, and teachers in your school regarding the needs each of you see in the vocational education area. The Ohio State group will be in touch with you about these inputs during the week of March 10.

Thanks for your cooperation with these significant activities!

E.D.B.

EDB:fd

cc: Secondary Counselors

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METROPOLITAN PUBLIC SCHOOLS

DATE: March 4, 1975

TO: Senior High Counselor Chairman

FROM: Dorothy M. Pease

RE: Orientation Meeting -- March 10, 1975 -- Back of the Board Room
Ohio State University Survey

You have received a copy of the memorandum to principals from Dr. Brooks regarding the Ohio State Survey of all 11th grade students and their parents. The purpose of the survey is the assessment of student needs and interests to provide one basis for expanding the vocational education program.

A survey orientation meeting will be held in the back of the Board Room, Monday, March 10, 1975, 1:30 p.m. Dr. Earl Russell of Ohio State will be with us to explain the survey and to discuss procedures. Your school survey forms will be made available at this meeting. The survey should take no longer than 20-30 minutes for students to complete. All 11th grade students will be surveyed on Wednesday, March 12th, and their parents on March 12-14.

If you are unable to attend the orientation meeting, please let this office know as soon as possible so that alternative arrangements can be made. Your cooperation is appreciated.

DMP:md

Copy: Principal

Metropolitan Public Schools

2601 BRANSFORD AVENUE
NASHVILLE, TENN. 37204

SURVEY OF STUDENT OCCUPATIONAL INTERESTS*

Purpose: To find out what jobs or occupations you and other 11th graders in the Nashville-Davidson County Metropolitan Public Schools would prefer to have at some time after completing your high school studies. Your interests are very important in the planning of more and better courses of study.

Part A
Instructions

Listed on the following page are 98 occupations in which many people are employed. Before making any marks on your answer sheet, please look over all of the occupations. Then, choose only three of the occupations which are most interesting to you. Since we want to know your interests, it doesn't matter whether or not (a) you are now taking courses to prepare you for entering a certain occupation, or (b) you are planning to wait until after high school to prepare for an occupation.

In any case, indicate your interests in three occupations by first recording, with a No. 2 pencil only, the number of your 1st, 2nd, and 3rd choices in the three blanks provided on your answer sheet. Then, fill in the circles completely to match the numbers of your choices. If you prefer an occupation not listed, write it in beside "99. Other--" in this booklet and fill in the circles to match "99" on your answer sheet.

PLEASE STUDY THE EXAMPLES BEFORE YOU BEGIN. Note on your answer sheet that the student chose "07. Architect" as 1st choice. Since the student's 2nd choice was not in the list, a "write-in" was entered:

99. Other -- Building contractor

Then, "99" was placed on the answer sheet and the matching circles were filled in.

You may begin now. If you have any questions, raise your hand.

---

*This survey is being done for the Nashville-Davidson County Metropolitan Public Schools as part of a contract with The Ohio State University, Columbus, Ohio.

01. Accountant
02. Accounting clerk, bookkeeper
03. Actor, actress
04. Airline pilot, copilot
05. Airline steward, stewardess
06. Animal caretaker, trainer
07. Architect
08. Artist, commercial or graphic
09. Astronomer
10. Athlete, professional
11. Auto body repairman
12. Auto service station attendant
13. Barber
14. Beauty operator, cosmetologist
15. Biologist
16. Bricklayer, mason
17. Broadcasting technician, specialist
18. Carpenter
19. Cashier
20. Chemist
21. Child care worker
22. Clergy
23. Computer programmer, technician
24. Cook, chef
25. Dental hygienist, assistant
26. Dentist
27. Dietician, dietician technician
28. Draftsman
29. Ecologist
30. Electrician
31. Engineer, agricultural
32. Engineer, chemical
33. Engineer, civil
34. Engineer, electrical
35. Engineer, industrial
36. Engineer, mechanical
37. Engineering technician
38. Farmer
39. Florist
40. Food waiter, waitress
41. Forester
42. Geologist
43. Greenhouse operator, nurseryman
44. Home economist
45. Hotel or motel desk clerk
46. Journalist
47. Ke/punch operator
48. Laboratory technician
49. Landscaper
50. Landscape attendant
51. Lawyer
52. Library attendant, assistant
53. Machinist
54. Meat cutter and wrapper
55. Mechanic, air craft
56. Mechanic, auto
57. Mechanic, diesel and heavy equipment
58. Mechanic, refrigeration and air-conditioning
59. Mechanic, small engine
60. Medical secretary
61. Medical technologist
62. Meteorologist
63. Model
64. Musician, singer
65. Nurse
66. Occupational Therapist
67. Office clerk
68. Painter, buildings
69. Pharmacist
70. Photographer
71. Physician, surgeon
72. Physicist
73. Police officer
74. Psychologist
75. Plumber
76. Printer, pressman
77. Radio and TV announcer
78. Radio and TV serviceman
79. Receptionist
80. Recording and film technician, specialist
81. Salesperson, agribusiness
82. Salesperson, automotive, recreational, and industrial
83. Salesperson, building materials and hardware
84. Salesperson, fashion merchandising
85. Salesperson, food merchandising
86. Salesperson, home furnishings and housewares
87. Salesperson, insurance, investments, and real estate
88. School counselor
89. Secretary, stenographer
90. Social worker
91. Soil conservationist
92. Teacher, teacher aide
93. Telephone installer, repairman
94. Therapist
95. Tool and die maker
96. Truck driver
97. Veterinarian
98. Welder
99. Other -- _____

(write in and mark on answer sheet) 223

Part B
Instructions

1. For the 3 occupations you selected in Part A, indicate on your answer sheet why you chose each of them. Here is how you are to respond. Fill in the circle beside the:

   a) if you feel the occupation is a short-term way to achieve some other position or career goal, or

   b) if you feel the occupation is a long-term goal of your life's work.

   AGAIN, NOTE THE EXAMPLES. The student indicated that "07. Architect" is a short-term goal by filling in the circle beside "a". The write-in, "99. Other -- Building contractor", is a long-term goal, so the circle beside "b" was filled in. Please fill in your choices now.

Note: The next item has to do with your general job interests. It does not refer to specific job choices.

2. Some major features or characteristics of jobs appear below. Please indicate on your answer sheet the 3 main features which you are seeking in an occupation. DO NOT mark more than 3 features.

   NOTE ON THE ANSWER SHEET EXAMPLES that the student chose the following three features: "e) Chance for advancement"; "j) Working with people"; and "p) Work which requires travel". Now mark your 3 choices on the answer sheet.

   a) Security
   b) High pay
   c) Status and prestige
   d) Challenge and excitement
   e) Chance for advancement
   f) Setting one's own hours
   g) Working with tools and materials
   h) Working indoors
   i) Regular working hours
   j) Working with people
   k) Easy job, easy to learn
   l) Working with ideas
   m) Working outdoors
   n) Pleasant working conditions
   o) Working alone (mainly under own direction)
   p) Work which requires travel

Part C
Instructions

During this part of the survey we want to find out your opinions about your school and future educational plans. Read each question and mark only one choice for each question. There are no right or wrong answers, so mark your choices as honestly as you can.

After noting the example marks on the left side of your answer sheet, mark only one choice for each question.

1. Does your school offer enough courses in career or vocational education?

   a) Yes
   b) No
   c) Not sure

2. Would you be interested in an internship program in the community (full-time work for one semester with no class attendance)?

   a) Yes
   b) No
   c) Not sure

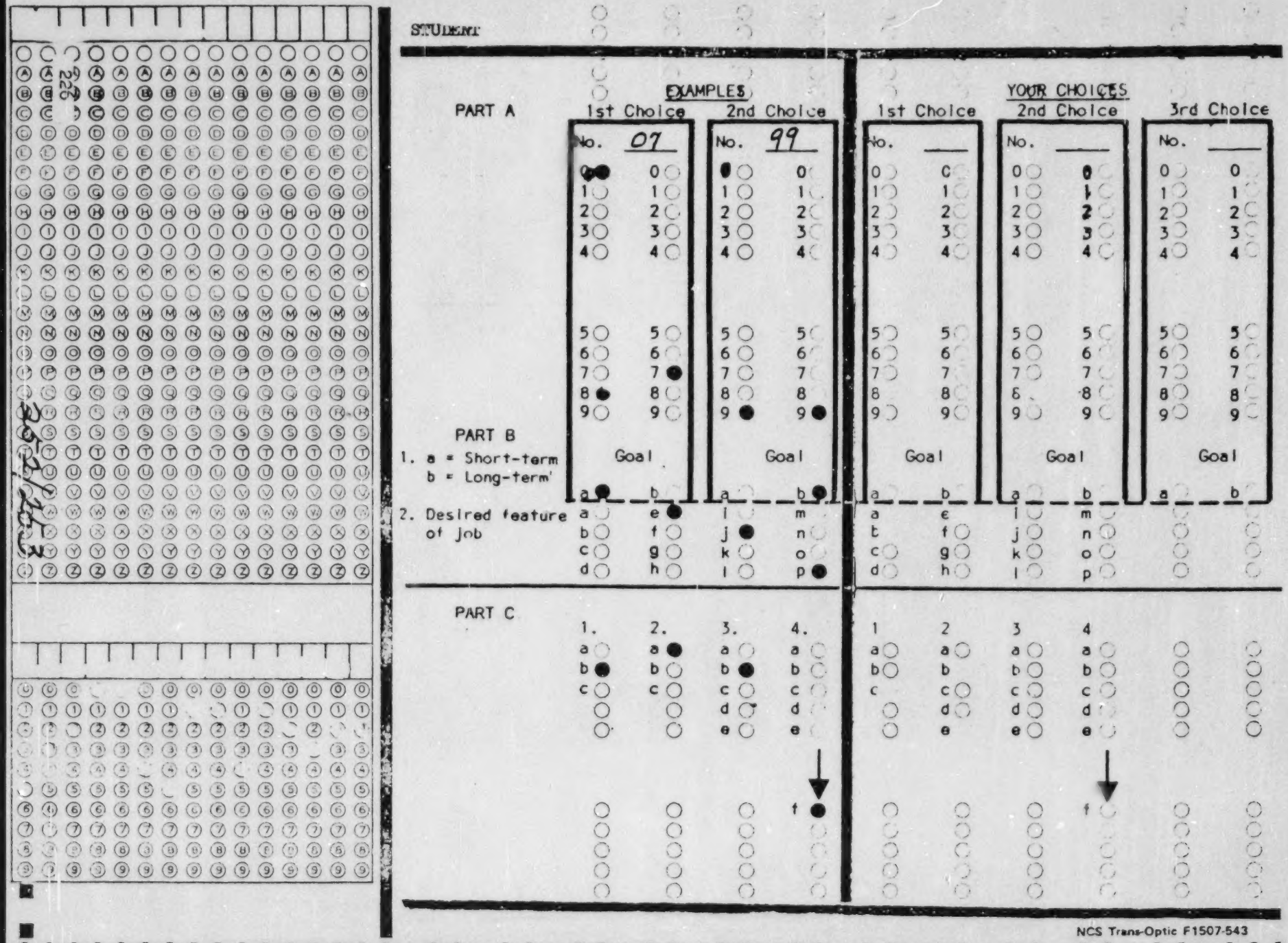
3. This school offers a good number and variety of courses to fit my own interests and needs.

   a) Strongly agree
   b) Agree
   c) Disagree
   d) Strongly disagree
   e) Not sure

4. How far do you want to go in school?

   a) Stop before finishing high school
   b) Finish high school only
   c) Technical, nursing, business school or junior college after high school
   d) Graduate from a four-year college
   e) Professional or graduate work after college
   f) Not sure

THANK YOU FOR YOUR COOPERATION!


STUDENT
PART A
EXAMPLES
1st Choice
No. 07
2nd Choice
No. 99
YOUR CHOICES
1st Choice
2nd Choice
3rd Choice
PART B
1. a = Short-term
b = Long-term
Goal
2. Desired feature of job
PART C
NCS Trans-Optic F1507-543

Metropolitan Public Schools

2601 BRANSFORD AVENUE
NASHVILLE, TENN. 37204

SURVEY OF PARENTS' OCCUPATIONAL EXPECTATIONS FOR THEIR CHILDREN*

Purpose: To find out what jobs or occupations you and other parents or guardians of 11th graders in the Nashville-Davidson County Metropolitan Public Schools would like your daughters and sons to pursue. Your opinions are needed for the planning of expanded and improved educational programs.

Part A
Instructions

Listed on the following page are 98 occupations in which many people are employed. Before making any marks on your answer sheet, please look over all of the occupations. Then, choose only 3 of the occupations you would most like your 11th grade daughter or son to pursue at some time after completing high school. Since we want to know your expectations, for the purposes of this survey it doesn't matter whether or not (a) your daughter or son is now taking courses to prepare for entering a certain occupation, or (b) your daughter or son is planning to wait until after high school to prepare for an occupation.

In any case, indicate your interests in 3 occupations by first recording, with a No. 2 pencil only, the number of your 1st, 2nd, and 3rd choices in the three blanks provided on your answer sheet. Then, fill in the circles completely to match the numbers of your choices. If you prefer an occupation not listed, write it in beside "99. Other--" in this booklet and fill in the circles to match "99" on your answer sheet.

PLEASE STUDY THE EXAMPLES BEFORE YOU BEGIN. Note on your answer sheet that the parent selected "07. Architect" as 1st choice. Since the parent's 2nd choice was not in the list, a "write-in" was entered:

99. Other -- Building contractor

Then, "99" was placed on the answer sheet and the matching circles were filled in.

Please begin now.

---

*This survey is being done for the Nashville-Davidson County Metropolitan Public Schools as part of a contract with The Ohio State University, Columbus, Ohio.

01. Accountant
02. Accounting clerk, bookkeeper
03. Actor, actress
04. Airline pilot, copilot
05. Airline steward, stewardess
06. Animal caretaker, trainer
07. Architect
08. Artist, commercial or graphic
09. Astronomer
10. Athlete, professional
11. Auto body repairman
12. Auto service station attendant
13. Barber
14. Beauty operator, cosmetologist
15. Biologist
16. Bricklayer, mason
17. Broadcasting technician, specialist
18. Carpenter
19. Cashier
20. Chemist
21. Child care worker
22. Clergy
23. Computer programmer, technician
24. Cook, chef
25. Dental hygienist, assistant
26. Dentist
27. Dietician, dietician technician
28. Draftsman
29. Ecologist
30. Electrician
31. Engineer, agricultural
32. Engineer, chemical
33. Engineer, civil
34. Engineer, electrical
35. Engineer, industrial
36. Engineer, mechanical
37. Engineering technician
38. Farmer
39. Florist
40. Food waiter, waitress
41. Forester
42. Geologist
43. Greenhouse operator, nurseryman
44. Home economist
45. Hotel or motel desk clerk
46. Journalist
47. Keypunch operator
48. Laboratory technician
49. Landscaper
50. Landscape attendant
51. Lawyer
52. Library attendant, assistant
53. Machinist
54. Meat cutter and wrapper
55. Mechanic, air craft
56. Mechanic, auto
57. Mechanic, diesel and heavy equipment
58. Mechanic, refrigeration and air-conditioning
59. Mechanic, small engine
60. Medical secretary
61. Medical technologist
62. Meteorologist
63. Model
64. Musician, singer
65. Nurse
66. Occupational Therapist
67. Office clerk
68. Painter, buildings
69. Pharmacist
70. Photographer
71. Physician, surgeon
72. Physicist
73. Police officer
74. Psychologist
75. Plumber
76. Printer, pressman
77. Radio and TV announcer
78. Radio and TV serviceman
79. Receptionist
80. Recording and film technician, specialist
81. Salesperson, agribusiness
82. Salesperson, automotive, recreational, and industrial
83. Salesperson, building materials and hardware
84. Salesperson, fashion merchandising
85. Salesperson, food merchandising
86. Salesperson, home furnishings and housewares
87. Salesperson, insurance, investments, and real estate
88. School counselor
89. Secretary, stenographer
90. Social worker
91. Soil conservationist
92. Teacher, teacher aide
93. Telephone installer, repairman
94. Therapist
95. Tool and die maker
96. Truck driver
97. Veterinarian
98. Welder
99. Other -- _____ (write in and mark on answer sheet)

Part B
Instructions

1. For the 3 occupations you selected in Part A, indicate on your answer sheet why you would have your 11th grader choose to work in each occupation. Here is how you are to respond. Fill in the circle beside the:

   a) if you feel the occupation would be a short-term way to achieve some other position or career goal, or

   b) if you feel the occupation would be a long-term goal of the life's work of your daughter or son.

   AGAIN, NOTE THE EXAMPLES. The parent indicated that "07. Architect" would be a short-term goal by filling in the circle beside "a". The write-in, "99. Other -- Building contractor", would be a long-term goal, so the circle beside "b" was filled in. Please fill in your choices now.

> Note: The next item has to do with your general job interests for your 11th grader. It does not refer to specific job choices.

2. Some major features or characteristics of jobs appear below. Please indicate on your answer sheet the 3 main features which you desire your daughter or son to seek in an occupation. DO NOT mark more than 3 features.

   NOTE ON THE ANSWER SHEET EXAMPLES that the parent chose the following 3 features: "e -- Chance for advancement"; "j -- Working with people"; and "p -- Work which requires travel." Now mark your 3 choices on the answer sheet.

   a) Security
   b) High pay
   c) Status and prestige
   d) Challenge and excitement
   e) Chance for advancement
   f) Setting one's own hours
   g) Working with tools and materials
   h) Working indoors
   i) Regular working hours
   j) Working with people
   k) Easy job, easy to learn
   l) Working with ideas
   m) Working outdoors
   n) Pleasant working conditions
   o) Working alone (mainly under own direction)
   p) Work which requires travel

Part C
Instructions

During this part of the survey we want to find out your opinions about present school offerings and future educational plans of your 11th grade child. Read each question and mark only one choice for each question. There are no right or wrong answers, so mark your choices as honestly as you can.

After noting the example marks on the left side of your answer sheet, mark only one choice for each question.

1. Does the school attended by your 11th grader offer enough courses in career or vocational education?

   a) Yes
   b) No
   c) Not sure

2. Would you be interested in your 11th grade daughter or son enrolling in an internship program in the community (full-time work for one semester with no class attendance)?

   a) Yes
   b) No
   c) Not sure

3. The school attended by my 11th grader offers a good number and variety of courses to fit her or his own interests and needs.

   a) Strongly agree
   b) Agree
   c) Disagree
   d) Strongly disagree
   e) Not sure

4. How far do you want your 11th grade daughter or son to go in school?

   a) Stop before finishing high school
   b) Finish high school only
   c) Technical, nursing, business school or junior college after high school
   d) Graduate from a four-year college
   e) Professional or graduate work after college
   f) Not sure

THANK YOU FOR YOUR COOPERATION!

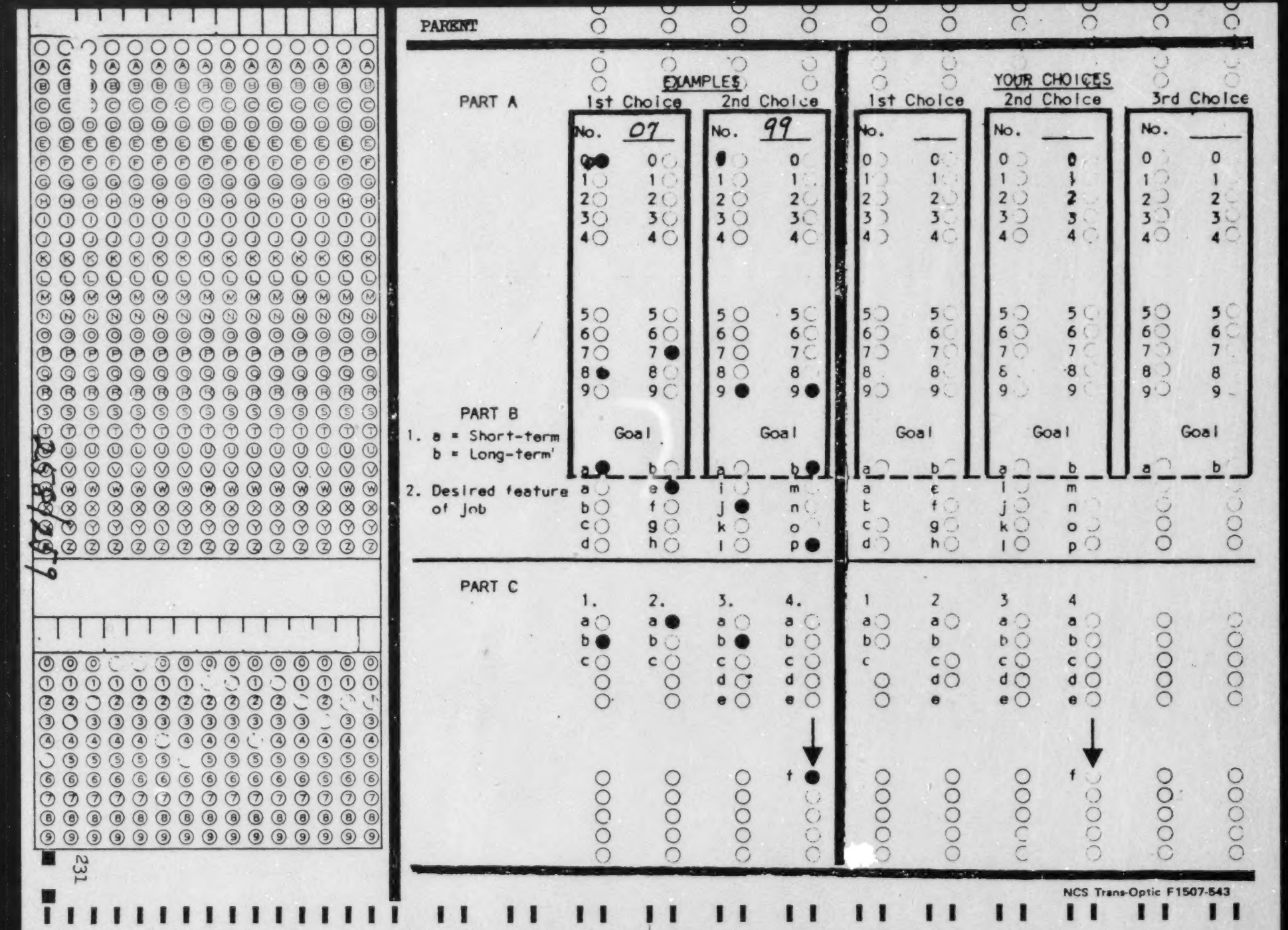

PARENT
PART A
EXAMPLES
1st Choice
2nd Choice
No. 07
No. 99
YOUR CHOICES
1st Choice
2nd Choice
3rd Choice
Goal
PART B
1. a = Short-term
b = Long-term
2. Desired feature of job
PART C
NCS Trans-Optic F1507-543

EXHIBIT 6

Occupational Choices of Students and Parents

- Table A. Occupational Choices of 11th Graders, Cumulative Scores, and Ranks

- Table B. Occupational Expectations of Parents for Their 11th Graders, Cumulative Scores, and Ranks

TABLE A

OCCUPATIONAL CHOICES OF 11TH GRADERS, CUMULATIVE SCORES, AND RANKS

Occupation	Choices: 1st No.	1st %	2nd No.	2nd %	3rd No.	3rd %	Total No.	Total %	Cumulative Score*	Rank
01. Accountant	77	54.6	40	28.4	24	17.0	141	100.0	335	28.0
02. Accounting clerk, bookkeeper	42	30.9	67	49.3	27	19.9	136	100.0	287	31.0
03. Actor, actress	36	35.6	42	41.6	23	22.8	101	100.0	215	38.0
04. Airline pilot, copilot	81	38.9	63	30.3	64	30.8	208	100.0	433	19.0
05. Airline steward, stewardess	107	39.3	86	31.6	79	29.0	272	100.0	572	10.0
06. Animal caretaker, trainer	41	30.8	44	33.1	48	36.1	133	100.0	259	35.0
07. Architect	109	47.8	72	31.6	47	20.6	228	100.0	518	13.0
08. Artist, commercial or graphic	112	47.5	62	26.3	62	26.3	236	100.0	522	12.0
09. Astronomer	16	27.6	20	34.5	22	37.9	58	100.0	110	67.0
10. Athlete, professional	180	56.1	68	21.2	73	22.7	321	100.0	749	4.0
11. Auto body repairman	49	36.8	42	31.6	42	31.6	133	100.0	273	33.5
12. Auto service station attendant	9	22.0	14	34.1	18	43.9	41	100.0	73	77.5
13. Barber	6	31.6	9	47.4	4	21.1	19	100.0	40	91.5
14. Beauty operator, cosmetologist	60	50.0	34	28.3	26	21.7	120	100.0	274	32.0
15. Biologist	19	29.2	25	38.5	21	32.3	65	100.0	128	58.0
16. Bricklayer, mason	32	40.0	26	32.5	22	27.5	30	100.0	170	49.0
17. Broadcasting technician, specialist	16	27.1	20	33.9	23	39.0	59	100.0	111	66.0
18. Carpenter	39	30.7	43	33.9	45	35.4	127	100.0	248	36.0
19. Cashier	21	18.1	46	39.7	49	42.2	116	100.0	204	41.5
20. Chemist	14	24.6	23	40.4	20	35.1	57	100.0	108	68.0
21. Child care worker	102	30.6	121	36.3	110	33.0	333	100.0	658	9.0
22. Clergy	18	64.3	4	14.3	6	21.4	28	100.0	68	81.0
23. Computer programmer, technician	100	45.5	65	29.5	55	25.0	220	100.0	485	15.0
24. Cook, chef	15	23.4	22	34.4	27	42.2	64	100.0	116	62.0
25. Dental hygienist, assistant	38	37.3	35	34.3	29	28.4	102	100.0	213	39.0
26. Dentist	31	34.1	35	38.5	25	27.5	91	100.0	188	45.0
27. Dietician, dietician technician	5	26.3	8	42.1	6	31.6	19	100.0	37	93.0
28. Draftsman	36	26.3	64	46.7	37	27.0	137	100.0	273	33.5
29. Ecologist	13	20.0	21	32.3	31	47.7	65	100.0	112	65.0
30. Electrician	58	39.5	41	27.9	48	32.7	147	100.0	304	30.0
31. Engineer, agricultural	7	21.9	10	31.2	15	46.9	32	100.0	56	87.0
32. Engineer, chemical	12	42.9	7	25.0	9	32.1	28	100.0	59	85.0
33. Engineer, civil	18	41.9	17	39.5	8	18.6	43	100.0	96	70.0
34. Engineer, electrical	38	42.2	30	33.3	22	24.4	90	100.0	196	44.0
35. Engineer, industrial	13	31.7	12	29.3	16	39.0	41	100.0	79	73.5
36. Engineer, mechanical	39	49.4	22	27.8	18	22.8	79	100.0	179	46.0
37. Engineering technician	11	26.8	16	39.0	14	34.1	41	100.0	79	73.5
38. Farmer	33	26.8	33	26.8	57	46.3	123	100.0	222	37.0
39. Florist	3	6.2	22	45.8	23	47.9	48	100.0	76	75.5
40. Food waiter, waitress	12	19.0	28	44.4	23	36.5	63	100.0	115	63.0
41. Forester	55	24.3	88	38.9	83	36.7	226	100.0	424	20.0
42. Geologist	3	13.0	12	52.2	8	34.8	23	100.0	41	90.0
43. Greenhouse operator, nurseryman	6	17.1	14	40.0	15	42.9	35	100.0	61	84.0
44. Home economist	18	20.2	29	32.6	42	47.2	89	100.0	154	53.0
45. Hotel or motel desk clerk	6	16.2	15	40.5	16	43.2	37	100.0	64	82.0
46. Journalist	28	25.7	46	42.2	35	32.1	109	100.0	211	40.0

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OCCUPATIONAL CHOICES OF 11TH GRADERS, CUMULATIVE SCORES, AND RANKS

Occupation	Choices 1st No.	1st %	2nd No.	2nd %	3rd No.	3rd %	Total No.	Total %	Cumulative Score*	Rank
47. Keypunch operator	41	20.6	83	41.7	75	37.7	199	100.0	364	23.0
48. Laboratory technician	23	32.4	33	46.5	15	21.1	71	100.0	150	54.0
49. Landscaper	17	32.1	15	28.3	21	39.6	53	100.0	102	69.0
50. Landscape attendant	16	48.5	8	24.2	9	27.3	33	100.0	73	77.5
51. Lawyer	87	39.7	70	32.0	62	28.3	219	100.0	463	17.0
52. Library attendant, assistant	3	14.3	8	38.1	10	47.6	21	100.0	35	95.5
53. Machinist	23	42.6	21	38.9	10	18.5	54	100.0	121	60.0
54. Meat cutter and wrapper	3	25.0	4	33.3	5	41.7	12	100.0	22	97.0
55. Mechanic, air craft	17	23.0	31	41.9	26	35.1	74	100.0	139	55.0
56. Mechanic, auto	134	41.4	109	33.6	81	25.0	324	100.0	701	7.0
57. Mechanic, diesel and heavy equipment	12	15.4	32	41.0	34	43.6	78	100.0	134	57.0
58. Mechanic, refrigeration and air-conditioning	15	50.0	9	30.0	6	20.0	30	100.0	69	80.0
59. Mechanic, small engine	16	23.9	28	41.8	23	34.3	67	100.0	127	59.0
60. Medical secretary	22	20.8	47	44.3	37	34.9	106	100.0	197	43.0
61. Medical technologist	25	30.1	35	42.2	23	27.7	83	100.0	168	50.0
62. Meteorologist	4	20.0	7	35.0	9	45.0	20	100.0	35	95.5
63. Model	62	22.8	82	30.1	128	47.1	272	100.0	478	16.0
64. Musician, singer	160	41.6	131	34.0	94	24.4	385	100.0	836	3.0
65. Nurse	158	50.5	85	27.2	70	22.4	313	100.0	714	6.0
66. Occupational therapist	7	17.1	16	39.0	18	43.9	41	100.0	71	79.0
67. Office clerk	18	18.4	41	41.8	39	39.8	98	100.0	175	47.5
68. Painter, buildings	3	12.5	10	41.7	11	45.8	24	100.0	40	91.5
69. Pharmacist	24	28.9	34	41.0	25	30.1	83	100.0	165	51.0
70. Photographer	47	18.4	93	36.3	116	45.3	256	100.0	443	18.0
71. Physician, surgeon	93	57.8	39	24.2	29	18.0	161	100.0	386	22.0
72. Physicist	5	26.3	7	36.8	7	36.8	19	100.0	36	94.0
73. Police officer	71	27.2	93	35.6	97	37.2	261	100.0	496	14.0
74. Psychologist	60	35.3	65	38.2	45	26.5	170	100.0	355	25.0
75. Plumber	9	26.5	11	32.4	14	41.2	34	100.0	63	88.0
76. Printer, pressman	11	22.9	18	37.5	19	39.6	48	100.0	88	71.0
77. Radio and TV announcer	45	23.7	71	37.4	74	38.9	190	100.0	351	26.0
78. Radio and TV serviceman	11	16.7	26	39.4	29	43.9	66	100.0	114	64.0
79. Receptionist	62	28.4	70	32.1	86	39.4	218	100.0	412	21.0
80. Recording and film technician, specialist	55	31.2	60	34.1	61	34.7	176	100.0	346	27.0
81. Salesperson, agribusiness	2	33.3	4	66.7	0	0.0	6	100.0	14	98.0
82. Salesperson, automotive, recreational, and industrial	12	25.0	8	16.7	28	58.3	48	100.0	80	72.0
83. Salesperson, building materials and hardware	0	0.0	3	30.0	7	70.0	10	100.0	13	99.0
84. Salesperson, fashion merchandising	36	20.6	64	36.6	75	42.9	175	100.0	311	29.0
85. Salesperson, food merchandising	10	33.3	7	23.3	13	43.3	30	100.0	57	86.0
86. Salesperson, home furnishings and housewares	3	10.7	8	28.6	17	60.7	28	100.0	42	88.5

Table A (continued)

OCCUPATIONAL CHOICES OF 11TH GRADERS, CUMULATIVE SCORES, AND RANKS

Occupation	Choices: 1st No.	1st %	2nd No.	2nd %	3rd No.	3rd %	Total No.	Total %	Cumulative Score*	Rank
87. Salesperson, insurance, investments, and real estate	18	24.0	27	36.0	30	40.0	75	100.0	138	56.0
88. School counselor	15	14.7	31	30.4	56	54.9	102	100.0	163	52.0
89. Secretary, stenographer	195	48.8	113	28.3	92	23.0	400	100.0	903	2.0
90. Social worker	75	19.5	144	37.4	166	43.1	385	100.0	679	8.0
91. Soil conservationist	4	16.7	10	41.7	10	41.7	24	100.0	42	88.5
92. Teacher, teacher aide	136	39.2	113	32.6	98	28.2	347	100.0	732	5.0
93. Telephone installer, repairman	11	16.2	27	39.7	30	44.1	68	100.0	117	61.0
94. Therapist	27	29.7	30	33.0	34	37.4	91	100.0	175	47.5
95. Tool and die maker	11	26.8	13	31.7	17	41.5	41	100.0	76	75.5
96. Truck driver	57	18.6	109	35.5	141	45.9	307	100.0	530	11.0
97. Veterinarian	60	32.3	53	28.5	73	39.2	186	100.0	359	24.0
98. Welder	27	24.3	39	35.1	45	40.5	111	100.0	204	41.5
99. Other --	275	43.2	153	24.0	209	32.8	637	100.0	1340	1.0

* Cumulative score is based upon the following weights for each person choosing a given occupation: 1st Choice = 3 points; 2nd Choice = 2 points; and 3rd Choice = 1 point.

Table A (continued)

TABLE B

OCCUPATIONAL EXPECTATIONS OF PARENTS FOR THEIR 11TH GRADERS, CUMULATIVE SCORES, AND RANKS

Occupation	Choices: 1st No.	1st %	2nd No.	2nd %	3rd No.	3rd %	Total No.	Total %	Cumulative Score*	Rank
01. Accountant	45	44.1	31	30.4	26	25.5	102	100.0	223	12.0
02. Accounting clerk, bookkeeper	33	37.9	36	41.4	18	20.7	87	100.0	189	16.0
03. Actor, actress	11	44.0	5	20.0	9	36.0	25	100.0	52	55.0
04. Airline pilot, copilot	25	43.9	18	31.6	14	24.6	57	100.0	125	26.0
05. Airline steward, stewardess	34	33.3	37	36.3	31	30.4	102	100.0	207	13.0
06. Animal caretaker, trainer	11	34.4	11	34.4	10	31.2	32	100.0	65	48.0
07. Architect	56	52.3	28	26.2	23	21.5	107	100.0	247	8.0
08. Artist, commercial or graphic	62	48.8	36	28.3	29	22.8	127	100.0	287	6.0
09. Astronomer	3	27.3	3	27.3	5	45.5	11	100.0	30	85.0
10. Athlete, professional	42	60.0	16	22.9	12	17.1	70	100.0	170	20.0
11. Auto body repairman	6	27.3	9	40.9	7	31.8	22	100.0	43	60.5
12. Auto service station attendant	1	16.7	2	33.3	3	50.0	6	100.0	10	94.0
13. Barber	0	0.0	1	33.3	2	66.7	3	100.0	4	98.5
14. Beauty operator, cosmetologist	32	48.5	18	27.3	16	24.2	66	100.0	148	23.0
15. Biologist	12	46.2	7	26.9	7	26.9	26	100.0	57	52.0
16. Bricklayer, mason	5	26.3	5	26.3	9	47.4	19	100.0	34	68.0
17. Broadcasting technician, specialist	8	40.0	7	35.0	5	25.0	20	100.0	43	60.5
18. Carpenter	7	25.0	9	32.1	12	42.9	28	100.0	51	56.0
19. Cashier	7	23.3	9	30.0	14	46.7	30	100.0	53	54.0
20. Chemist	8	28.6	13	46.4	7	25.0	28	100.0	57	52.0
21. Child care worker	28	29.8	31	33.0	35	37.2	94	100.0	181	18.0
22. Clergy	10	41.7	6	25.0	8	33.3	24	100.0	50	57.5
23. Computer programmer, technician	51	39.8	46	35.9	31	24.2	128	100.0	276	7.0
24. Cook, chef	3	25.0	4	33.3	5	41.7	12	100.0	22	83.0
25. Dental hygienist, assistant	35	38.0	33	36.7	22	24.4	90	100.0	193	15.0
26. Dentist	22	39.3	19	33.9	15	26.8	56	100.0	119	28.5
27. Dietician, dietician technician	3	17.6	6	35.3	8	47.1	17	100.0	29	72.5
28. Draftsman	13	26.0	23	46.0	14	28.0	50	100.0	99	38.0
29. Ecologist	4	10.5	17	44.7	17	44.7	38	100.0	63	50.0
30. Electrician	13	30.2	18	41.9	12	27.9	43	100.0	87	43.0
31. Engineer, agricultural	4	57.1	1	14.3	2	28.6	7	100.0	16	88.5
32. Engineer, chemical	3	42.9	2	28.6	2	28.6	7	100.0	15	90.0
33. Engineer, civil	11	35.5	15	48.4	5	16.1	31	100.0	68	47.0
34. Engineer, electrical	21	43.1	25	43.1	8	13.8	58	100.0	133	25.0
35. Engineer, industrial	11	40.7	8	29.6	8	29.6	27	100.0	57	52.0
36. Engineer, mechanical	17	36.2	20	42.6	10	21.3	47	100.0	101	35.0
37. Engineering technician	5	31.2	4	25.0	7	43.7	16	100.0	30	71.0
38. Farmer	3	20.0	5	33.3	7	46.7	15	100.0	26	78.0
39. Florist	3	18.7	7	43.7	6	37.5	16	100.0	29	72.5
40. Food waiter, waitress	3	21.4	6	42.9	5	35.7	14	100.0	26	78.0
41. Forester	21	38.9	20	37.0	13	24.1	54	100.0	116	30.0
42. Geologist	3	12.5	10	41.7	11	45.8	24	100.0	40	63.5
43. Greenhouse operator, nurseryman	2	28.6	3	42.9	2	28.6	7	100.0	14	91.0
44. Home economist	18	29.0	21	33.9	23	37.1	62	100.0	119	28.5
45. Hotel or motel desk clerk	0	0.0	4	80.0	1	20.0	5	100.0	9	95.0
46. Journalist	28	35.9	21	26.9	29	37.2	78	100.0	155	21.0

OCCUPATIONAL EXPECTATIONS OF PARENTS FOR THEIR 11TH GRADERS, CUMULATIVE SCORES, AND RANKS

Occupation	Choices: 1st No.	1st %	2nd No.	2nd %	3rd No.	3rd %	Total No.	Total %	Cumulative Score*	Rank
47. Keypunch operator	23	25.3	40	44.0	28	30.8	91	100.0	177	19.0
48. Laboratory technician	16	30.8	21	40.4	15	28.8	52	100.0	105	34.0
49. Landscaper	1	8.3	3	25.0	8	66.7	12	100.0	17	87.0
50. Landscape attendant	6	54.5	3	27.3	2	18.2	11	100.0	26	78.0
51. Lawyer	43	38.7	34	30.6	34	30.6	111	100.0	231	11.0
52. Library attendant, assistant	3	14.3	10	47.6	8	38.1	21	100.0	37	65.0
53. Machinist	5	26.3	11	57.9	3	15.8	19	100.0	40	63.5
54. Meat cutter and wrapper	0	0.0	2	100.0	0	0.0	2	100.0	4	98.5
55. Mechanic, air craft	6	22.2	11	40.7	10	37.0	27	100.0	50	57.5
56. Mechanic, auto	26	34.7	27	36.0	22	29.3	75	100.0	154	22.0
57. Mechanic, diesel and heavy equipment	3	21.4	4	28.6	7	50.0	14	100.0	24	81.5
58. Mechanic, refrigeration and air-conditioning	4	28.6	5	35.7	5	35.7	14	100.0	27	75.5
59. Mechanic, small engine	3	23.1	5	38.5	5	38.5	13	100.0	24	81.5
60. Medical secretary	24	35.8	28	41.8	15	22.4	67	100.0	143	24.0
61. Medical technologist	8	14.3	20	35.7	28	50.0	56	100.0	92	40.5
62. Meteorologist	4	25.0	3	18.7	9	56.2	16	100.0	27	75.5
63. Model	13	18.6	19	27.1	38	54.3	70	100.0	115	31.0
64. Musician, singer	45	38.5	38	32.5	34	29.1	117	100.0	245	9.0
65. Nurse	93	44.5	73	34.9	43	20.6	209	100.0	468	1.0
66. Occupational therapist	3	14.3	9	42.9	9	42.9	21	100.0	36	66.0
67. Office clerk	8	14.8	22	40.7	24	44.4	54	100.0	92	40.5
68. Painter, buildings	0	0.0	5	71.4	2	28.6	7	100.0	12	93.0
69. Pharmacist	15	29.4	25	49.0	11	21.6	51	100.0	106	33.0
70. Photographer	7	12.7	27	49.1	21	38.2	55	100.0	96	39.0
71. Physician, surgeon	62	61.4	15	14.9	24	23.8	101	100.0	240	10.0
72. Physicist	5	41.7	3	25.0	4	33.3	12	100.0	25	80.0
73. Police Officer	6	12.2	20	40.8	23	46.9	49	100.0	81	44.0
74. Psychologist	12	20.3	28	47.5	19	32.2	59	100.0	111	32.0
75. Plumber	5	38.5	5	38.5	3	23.1	13	100.0	28	74.0
76. Printer, preasman	7	46.7	6	40.0	2	13.3	15	100.0	35	67.0
77. Radio and TV announcer	16	22.9	20	28.6	34	48.6	70	100.0	122	27.0
78. Radio and TV serviceman	4	21.1	5	26.3	10	52.6	19	100.0	32	69.0
79. Receptionist	27	26.2	41	39.8	35	34.0	103	100.0	198	14.0
80. Recording and film technician, specialist	10	20.0	19	38.0	21	42.0	50	100.0	89	42.0
81. Salesperson, agribusiness	0	0.0	1	25.0	3	75.0	4	100.0	5	97.0
82. Salesperson, automotive, recreational, and industrial	1	8.3	2	16.7	9	75.0	12	100.0	16	88.5
83. Salesperson, building materials and hardware	1	33.3	1	33.3	1	33.3	3	100.0	6	96.0
84. Salesperson, fashion merchandising	14	26.4	19	35.8	20	37.7	53	100.0	100	36.5
85. Salesperson, food merchandising	2	16.7	2	16.7	8	66.7	12	100.0	18	86.0
86. Salesperson, home furnishings and housewares	2	28.6	2	28.6	3	42.9	7	100.0	13	92.0

Table B (continued)

OCCUPATIONAL EXPECTATIONS OF PARENTS FOR THEIR 11TH GRADERS, CUMULATIVE SCORES, AND RANKS

Occupation	Choices: 1st No.	1st %	2nd No.	2nd %	3rd No.	3rd %	Total No.	Total %	Cumulative Score*	Rank
87. Salesperson, insurance, investments, and real estate	7	17.1	9	22.0	25	61.0	41	100.0	64	49.0
88. School counselor	8	18.6	17	39.5	18	41.9	43	100.0	76	46.0
89. Secretary, stenographer	83	36.4	62	27.2	83	36.4	228	100.0	456	2.0
90. Social worker	43	22.3	70	36.3	80	41.5	193	100.0	349	5.0
91. Soil conservationist	3	16.7	7	38.9	8	44.4	18	100.0	31	70.0
92. Teacher, teacher aide	68	33.2	60	29.3	77	37.6	205	100.0	401	4.0
93. Telephone installer, repairman	4	16.7	9	37.5	11	45.8	24	100.0	41	62.0
94. Therapist	15	26.8	14	25.0	27	48.2	56	100.0	100	36.5
95. Tool and die maker	3	21.4	1	7.1	10	71.4	14	100.0	21	84.0
96. Truck driver	9	20.0	15	33.3	21	46.7	45	100.0	78	45.0
97. Veterinarian	36	38.3	22	23.4	36	38.3	94	100.0	186	17.0
98. Welder	7	26.9	6	23.1	13	50.0	26	100.0	46	59.0
99. Other --	90	44.6	47	23.3	65	32.2	202	100.0	429	3.0

* Cumulative score is based upon the following weights for each person choosing a given occupation: 1st Choice = 3 points; 2nd Choice = 2 points; and 3rd Choice = 1 point.

Table B (continued)

EXHIBIT 7

Ranked Occupational Interests/Expectations

- Table A. Ranked Occupational Interests of 11th Graders, by Sex and Total Group

- Table B. Ranked Occupational Expectations of Parents for Their 11th Graders, by Sex of Students and Total Group

TABLE A

RANKED OCCUPATIONAL INTERESTS OF 11TH GRADERS, BY SEX AND TOTAL GROUP

Female		Male		All Students	
Rank	Occupation	Rank	Occupation	Rank	Occupation
1.0	Secretary, stenographer	1.0	Other --	1.0	Other --
2.0	Nurse	2.0	Athlete, professional	2.0	Secretary, stenographer
3.0	Child care worker	3.0	Mechanic, auto	3.0	Musician, singer
4.0	Other --	4.0	Musician, singer	4.0	Athlete, professional
5.0	Social worker	5.0	Truck driver	5.0	Teacher, teacher aide
6.0	Teacher, teacher aide	6.0	Architect	6.0	Nurse
7.0	Airline steward, stewardess	7.0	Police officer	7.0	Mechanic, auto
8.0	Model	8.0	Airline pilot, copilot	8.0	Social worker
9.0	Receptionist	9.0	Forester	9.0	Child care worker
10.0	Musician, singer	10.0	Lawyer	10.0	Airline steward, stewardess
11.0	Keypunch operator	11.0	Radio and TV announcer	11.0	Truck driver
12.0	Beauty operator, cosmetologist	12.0	Electrician	12.0	Artist, commercial or graphic
13.0	Salesperson, fashion merchandising	13.0	Recording and film technician, specialist	13.0	Architect
14.0	Psychologist			14.0	Police officer
15.0	Artist, commercial or graphic	14.0	Computer programmer, technician	15.0	Computer programmer, technician
16.0	Accounting clerk, bookkeeper	15.0	Draftsman	16.0	Model
		16.0	Auto body repairman	17.0	Lawyer
17.5	Photographer	17.0	Artist, commercial or graphic		
17.5	Veterinarian	18.5	Carpenter		
		18.5	Photographer	18.0	Photographer
19.0	Computer programmer, technician			19.0	Airline pilot, copilot
20.0	Dental hygienist, assistant	20.0	Physician, surgeon	20.0	Forester
21.0	Animal caretaker, trainer	21.0	Welder	21.0	Receptionist
22.0	Medical secretary	22.0	Engineer, electrical	22.0	Physician, surgeon
23.0	Cashier	23.0	Teacher, teacher aide	23.0	Keypunch operator
24.0	Lawyer	24.0	Accountant	24.0	Veterinarian
				25.0	Psychologist
25.5	Office clerk	25.5	Dentist		
25.5	Accountant	25.5	Farmer		
				26.0	Radio and TV announcer
27.0	Physician, surgeon	27.0	Engineer, mechanical	27.0	Recording and film technician, specialist
		28.0	Bricklayer, mason	28.0	Accountant
28.5	Home economist				
28.5	Therapist				
		29.0	Veterinarian	29.0	Salesperson, fashion merchandising
30.0	Actor, actress	30.0	Mechanic, air craft	30.0	Electrician
		31.0	Mechanic, diesel and heavy equipment	31.0	Accounting clerk, bookkeeper
31.5	School counselor				
31.5	Journalist				
		32.0	Mechanic, small engine	32.0	Beauty operator, cosmetologist
33.0	Laboratory technician	33.0	Social worker		
				33.5	Auto body repairman
				33.5	Draftsman
34.0	Police officer	34.0	Machinist		
35.0	Medical technologist	35.0	Radio and TV serviceman	35.0	Animal caretaker, trainer
36.0	Forester	36.0	Pharmacist	36.0	Carpenter

RANKED OCCUPATIONAL INTERESTS OF 11TH GRADERS, BY SEX AND TOTAL GROUP

Female		Male		All Students	
Rank	Occupation	Rank	Occupation	Rank	Occupation
37.0	Food waiter, waitress	37.0	Telephone installer, repairman	37.0	Farmer
38.0	Recording and film technician, specialist	38.0	Salesperson, insurance, investments, and real estate	38.0	Actor, actress
		39.0	Landscaper	39.0	Dental hygienist, assistant
39.5	Occupational therapist				
39.5	Architect				
		40.0	Psychologist	40.0	Journalist
41.5	Biologist	41.0	Broadcasting technician, specialist	41.5	Welder
41.5	Florist			41.5	Cashier
43.0	Radio and TV announcer	42.0	Actor, actress	43.0	Medical secretary
44.0	Pharmacist	43.0	Journalist	44.0	Engineer, electrical
45.0	Farmer	44.0	Cook, chef	45.0	Dentist
46.0	Athlete, professional	45.0	Engineer, civil	46.0	Engineer, mechanical
47.0	Airline pilot, copilot	46.0	Medical technologist		
		47.0	Printer, pressman	47.5	Therapist
48.0	Astronomer	48.0	Salesperson, automotive, recreational, and industrial	47.5	Office clerk
49.0	Landscape attendant	49.0	Ecologist	49.0	Bricklayer, mason
50.0	Chemist	50.5	Engineering technician	50.0	Medical technologist
51.0	Ecologist	50.5	Tool and die maker	51.0	Pharmacist
		52.0	Auto service station attendant	52.0	School counselor
52.5	Dietician, dietician technician				
52.5	Salesperson, insurance, investments, and real estate				
		53.0	Engineer, industrial	53.0	Home economist
54.0	Cook, chef	54.0	Animal caretaker, trainer	54.0	Laboratory technician
55.0	Hotel or motel desk clerk	55.0	Chemist	55.0	Mechanic, air craft
56.0	Library attendant, assistant	56.5	Accounting clerk, bookkeeper	56.0	Salesperson, insurance, investments, and real estate
		56.5	Mechanic, refrigeration and air-conditioning	57.0	Mechanic, diesel and heavy equipment
57.0	Broadcasting technician, specialist				
58.0	Dentist	58.0	Astronomer	58.0	Biologist
59.0	Salesperson, home furnishings and housewares	59.0	Biologist	59.0	Mechanic, small engine
				60.0	Machinist
60.5	Engineer, mechanical	60.5	Plumber		
60.5	Greenhouse operator, nurseryman	60.5	Keypunch operator		
		62.5	Clergy	61.0	Telephone installer, repairman
62.0	Barber	62.5	Engineer, agricultural	62.0	Cook, chef
63.0	Mechanic, auto			63.0	Food waiter, waitress
64.0	Carpenter	64.0	Salesperson, food merchandising	64.0	Radio and TV serviceman
		65.0	Laboratory technician	65.0	Ecologist
65.5	Clergy				
65.5	Truck driver				
		66.0	Engineer, chemical	66.0	Broadcasting technician, specialist
		67.0	Salesperson, fashion merchandising	67.0	Astronomer
		68.0	Greenhouse operator, nurseryman	68.0	Chemist
68.5	Soil conservationist				
68.5	Electrician				
68.5	Engineer, civil				
68.5	Engineer, chemical				

Table A (continued)

RANKED OCCUPATIONAL INTERESTS OF 11TH GRADERS, BY SEX AND TOTAL GROUP

Female		Male		All Students	
Rank	Occupation	Rank	Occupation	Rank	Occupation
				69.0	Landscaper
		70.5	School counselor	70.0	Engineer, civil
71.0	Bricklayer, mason	70.5	Food waiter, waitress	71.0	Printer, pressman
		70.5	Hotel or motel desk clerk	72.0	Salesperson, automotive, recreational, and industrial
		70.5	Geologist		
72.5	Telephone installer, repairman				
72.5	Printer, pressman				
		73.0	Painter, buildings	73.5	Engineer, industrial
				73.5	Engineering technician
74.0	Engineer, industrial	74.0	Cashier		
				75.5	Tool and die maker
				75.5	Florist
76.0	Physicist	76.0	Child care worker		
76.0	Salesperson, food merchandising	76.0	Landscape attendant		
76.0	Landscaper	76.0	Meteorologist		
				77.5	Landscape attendant
				77.5	Auto service station attendant
78.0	Engineering technician	78.0	Soil conservationist		
				79.0	Occupational therapist
79.5	Engineer, electrical	79.5	Model		
79.5	Auto body repairman	79.5	Airline steward, stewardess		
				80.0	Mechanic, refrigeration and air-conditioning
		81.0	Physicist	81.0	Clergy
		82.0	Therapist	82.0	Hotel or motel desk clerk
		83.0	Barber	83.0	Plumber
84.0	Draftsman	84.0	Salesperson, home furnishings and housewares	84.0	Greenhouse operator, nurseryman
84.0	Geologist				
84.0	Tool and die maker				
84.0	Painter, buildings				
84.0	Salesperson, automotive recreational, and industrial				
84.0	Salesperson, agribusiness				
84.0	Meteorologist				
		85.0	Meat cutter and wrapper	85.0	Engineer, chemical
		86.0	Office clerk	86.0	Salesperson, food merchandising
		87.0	Secretary, stenographer	87.0	Engineer, agricultural
		88.0	Medical secretary	88.5	Soil conservationist
				88.5	Salesperson, home furnishings and housewares
89.5	Mechanic, refrigeration and air-conditioning	89.5	Florist		
89.5	Machinist	89.5	Salesperson, building materials and hardware		
89.5	Radio and TV serviceman				
89.5	Auto service station attendant				
		91.0	Nurse	91.0	Geologist
		92.5	Salesperson, agribusiness	91.5	Barber
		92.5	Library attendant, assistant	91.5	Painter, buildings
93.0	Engineer, agricultural			93.0	Dietician, dietician technician
93.0	Plumber				
93.0	Mechanic, small engine				

Table A (continued)

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RANKED OCCUPATIONAL INTERESTS OF 11TH GRADERS, BY SEX AND TOTAL GROUP

Female		Male		All Students	
Rank	Occupation	Rank	Occupation	Rank	Occupation
		94.0	Dental hygienist, assistant	94.0	Physicist
		95.0	Occupational therapist	95.5	Meteorologist
		96.5	Dietician, dietician technician	95.5	Library attendant, assistant
97.0	Mechanic, diesel and heavy equipment	96.5	Home economist	97.0	Meat cutter and wrapper
97.0	Mechanic, air craft				
97.0	Meat cutter and wrapper				
97.0	Salesperson, building materials and hardware				
97.0	Welder				
		98.0	Beauty operator, cosmetologist	98.0	Salesperson, agribusiness
		99.0	Receptionist	99.0	Salesperson, building materials and hardware

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Table A (continued)

TABLE B

RANKED OCCUPATIONAL EXPECTATIONS OF PARENTS FOR THEIR 11TH GRADERS, BY SEX OF STUDENTS AND TOTAL GROUP

Parents of Females		Parents of Males		All Parents	
Rank	Occupation	Rank	Occupation	Rank	Occupation
1.0	Nurse	1.0	Architect	1.0	Nurse
2.0	Secretary, stenographer	2.0	Other --	2.0	Secretary, stenographer
3.0	Teacher, teacher aide	3.0	Athlete, professional	3.0	Other --
4.0	Social worker	4.0	Mechanic, auto	4.0	Teacher, teacher aide
5.0	Other --	5.0	Physician, surgeon	5.0	Social worker
6.0	Airline steward, stewardess	6.0	Musician, singer	6.0	Artist, commercial or graphic
7.0	Receptionist	7.0	Lawyer	7.0	Computer programmer, technician
8.0	Dental hygienist, assistant	8.0	Computer programmer, technician	8.0	Architect
9.0	Accounting clerk, bookkeeper	9.0	Artist, commercial or graphic	9.0	Musician, singer
10.0	Child care worker	10.0	Engineer, electrical	10.0	Physician, surgeon
11.0	Keypunch operator	11.0	Airline pilot, copilot	11.0	Lawyer
12.0	Artist, commercial or graphic	12.0	Accountant	12.0	Accountant
13.0	Computer programmer, technician	13.0	Forester	13.0	Airline steward, stewardess
14.0	Beauty operator, cosmetologist	14.0	Dentist	14.0	Receptionist
15.0	Medical secretary	15.0	Radio and TV announcer	15.0	Dental hygienist, assistant
16.0	Accountant	16.0	Draftsman	16.0	Accounting clerk, bookkeeper
17.0	Home economist			17.0	Veterinarian
		17.5	Engineer, mechanical		
		17.5	Veterinarian		
18.0	Journalist			18.0	Child care worker
		19.0	Electrician	19.0	Keypunch operator
19.5	Model				
19.5	Musician, singer				
		20.0	Truck driver	20.0	Athlete, professional
21.0	Therapist	21.0	Recording and film technician, specialist	21.0	Journalist
22.0	Veterinarian	22.0	Pharmacist	22.0	Mechanic, auto
23.0	Lawyer	23.0	Engineer, civil	23.0	Beauty operator, cosmetologist
24.0	Psychologist	24.0	Teacher, teacher aide	24.0	Medical secretary
25.0	Physician, surgeon	25.0	Police officer	25.0	Engineer, electrical
		26.0	Engineer, industrial	26.0	Airline pilot, copilot
26.5	Office clerk				
26.5	Salesperson, fashion merchandising				
		27.0	Carpenter	27.0	Radio and TV announcer
28.0	Laboratory technician	28.0	Mechanic, air craft		
				28.5	Dentist
				28.5	Home Economist
29.0	School counselor	29.0	Clergy		
30.0	Medical technologist			30.0	Forester
31.0	Photographer	31.0	Photographer	31.0	Model
		31.0	Welder		
		31.0	Journalist		
32.0	Cashier			32.0	Psychologist
33.0	Animal caretaker, trainer	33.0	Salesperson, insurance, investments, and real estate	33.0	Pharmacist
34.0	Pharmacist	34.0	Auto body repairman	34.0	Laboratory technician
		35.0	Machinist	35.0	Engineer, mechanical

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RANKED OCCUPATIONAL EXPECTATIONS OF PARENTS FOR THEIR 11TH GRADERS, BY SEX OF STUDENTS AND TOTAL GROUP

Parents of Females		Parents of Males		All Parents	
Rank	Occupation	Rank	Occupation	Rank	Occupation
35.5	Architect				
35.5	Occupational therapist				
		36.0	Telephone installer, repairman		
				36.5	Therapist
				36.5	Salesperson, fashion merchandising
37.5	Biologist	37.5	Broadcasting technician, specialist		
37.5	Library attendant, assistant	37.5	Bricklayer, mason		
				38.0	Draftsman
39.0	Actor, actress	39.0	Ecologist	39.0	Photographer
40.0	Ecologist			40.5	Medical technologist
				40.5	Office clerk
		41.0	Social worker		
		41.0	Geologist		
		41.0	Radio and TV serviceman		
41.5	Florist				
41.5	Dietician, dietician technician				
				42.0	Recording and film technician, specialist
43.0	Chemist	43.0	Printer, pressman	43.0	Electrician
44.0	Radio and TV announcer			44.0	Police officer
		44.5	Engineering technician		
		44.5	Chemist		
45.0	Police officer			45.0	Truck driver
46.0	Salesperson, insurance, investments, and real estate	46.0	Laboratory technician	46.0	School counselor
		47.0	Plumber	47.0	Engineer, civil
47.5	Athlete, professional				
47.5	Recording and film technician, specialist				
		48.0	Mechanic, refrigeration and air-conditioning	48.0	Animal caretaker, trainer
		49.0	Medical technologist	49.0	Salesperson, insurance, investments, and real estate
49.5	Food waiter, waitress				
49.5	Dentist				
		50.0	Biologist	50.0	Ecologist
51.5	Forester	51.5	Mechanic, diesel and heavy equipment		
51.5	Landscape attendant	51.5	Farmer		
				52.0	Biologist
				52.0	Chemist
				52.0	Engineer, industrial
53.0	Airline pilot, copilot				
		53.5	Meteorologist		
		53.5	Soil conservationist		
				54.0	Cashier

Table B (continued)

RANKED OCCUPATIONAL EXPECTATIONS OF PARENTS FOR THEIR 11TH GRADERS, BY SEX OF STUDENTS AND TOTAL GROUP

Parents of Females		Parents of Males		All Parents	
Rank	Occupation	Rank	Occupation	Rank	Occupation
54.5	Broadcasting technician, specialist				
54.5	Engineer, mechanical				
				55.0	Actor, actress
		55.5	Mechanic, small engine		
		55.5	Nurse		
				56.0	Carpenter
57.0	Physicist				
57.0	Soil conservationist				
57.0	Geologist				
		57.5	Animal caretaker, trainer	57.5	Clergy
		57.5	Actor, actress	57.5	Mechanic, air craft
		59.0	Tool and die maker	59.0	Welder
60.0	Astronomer			60.5	Broadcasting technician, specialist
60.0	Salesperson, food merchandising	60.5	Psychologist		
60.0	Engineer, electrical	60.5	Physicist	60.5	Auto body repairman
		63.0	Salesperson, automotive, recreational, and industrial	62.0	Telephone installer, repairman
63.0	Telephone installer, repairman				
63.0	Greenhouse operator, nurseryman	63.0	Engineer, agricultural		
63.0	Cook, chef	63.0	Cook, chef		
				63.5	Machinist
				63.5	Geologist
		65.0	Landscaper	65.0	Library attendant, assistant
65.5	Salesperson, home furnishings and housewares				
65.5	Mechanic, auto			66.0	Occupational therapist
		67.0	Landscape attendant	67.0	Printer, pressman
		67.0	Keypunch operator		
		67.0	Accounting clerk, bookkeeper		
				68.0	Bricklayer, mason
68.5	Meteorologist				
68.5	Printer, pressman				
68.5	Machinist				
68.5	Engineer, civil				
				69.0	Radio and TV serviceman
				70.0	Soil conservationist
		70.5	Engineer, chemical		
		70.5	Beauty operator, cosmetologist		
		70.5	Astronomer		
		70.5	Model		
				71.0	Engineering technician
72.5	Engineer, industrial			72.5	Dietician, dietician technician
72.5	Hotel or motel desk clerk			72.5	Florist
72.5	Truck driver				
72.5	Electrician				
		73.5	Painter, buildings		
		73.5	Salesperson, fashion merchandising		
				74.0	Plumber

Table B (continued)

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RANKED OCCUPATIONAL EXPECTATIONS OF PARENTS FOR THEIR 11TH GRADERS, BY SEX OF STUDENTS AND TOTAL GROUP

Parents of Females		Parents of Males		All Parents	
Rank	Occupation	Rank	Occupation	Rank	Occupation
				75.5	Mechanic, refrigeration and air-conditioning
				75.5	Meteorologist
		76.0	Salesperson, food merchandising		
		76.0	Secretary, stenographer		
		76.0	Dental hygienist, assistant		
77.0	Engineer, chemical				
77.0	Farmer				
77.0	Salesperson, agribusiness				
77.0	Landscaper				
77.0	Mechanic, small engine				
		78.0	Auto service station attendant	78.0	Food waiter, waitress
				78.0	Farmer
				78.0	Landscape attendant
		80.0	Airline steward, stewardess	80.0	Physicist
		80.0	Medical secretary		
		80.0	Food waiter, waitress		
81.0	Clergy				
81.0	Tool and die maker			81.5	Mechanic, small engine
81.0	Draftsman			81.5	Mechanic, diesel and heavy equipment
		83.0	Greenhouse operator, nurseryman	83.0	Cook, chef
		83.0	Salesperson, home furnishings and housewares		
		83.0	Cashier		
				84.0	Tool and die maker
		85.0	Child care worker	85.0	Astronomer
				86.0	Salesperson, food merchandising
		87.0	School counselor	87.0	Landscaper
		87.0	Hotel or motel desk clerk		
		87.0	Salesperson, building materials and hardware		
				88.5	Engineer, agricultural
				88.5	Salesperson, automotive, recreational, and industrial
		89.0	Library attendant, assistant		
				90.0	Engineer, chemical
				91.0	Greenhouse operator, nurseryman
91.0	Mechanic, air craft				
91.0	Meat cutter and wrapper				
91.0	Welder				
91.0	Radio and TV serviceman				
91.0	Plumber				
91.0	Carpenter				
91.0	Salesperson, automotive, recreational, and industrial				
91.0	Auto service station attendant				
91.0	Auto body repairman				
91.0	Bricklayer, mason				

Table B (continued)

RANKED OCCUPATIONAL EXPECTATIONS OF PARENTS FOR THEIR 11TH GRADERS, BY SEX OF STUDENTS AND TOTAL GROUP

Parents of Females		Parents of Males		All Parents	
Rank	Occupation	Rank	Occupation	Rank	Occupation
91.0	Barber				
91.0	Engineer, agricultural				
91.0	Mechanic, refrigeration and air-conditioning				
91.0	Salesperson, building materials and hardware				
91.0	Painter, buildings				
91.0	Mechanic, diesel and heavy equipment				
91.0	Engineering technician				
		91.5	Meat cutter and wrapper		
		91.5	Office clerk		
		91.5	Home economist		
		91.5	Barber		
				92.0	Salesperson, home furnishings and housewares
				93.0	Painter, buildings
		94.0	Salesperson, agribusiness	94.0	Auto service station attendant
		95.0	Therapist	95.0	Hotel or motel desk clerk
				96.0	Salesperson, building materials and hardware
				97.0	Salesperson, agribusiness
		97.5	Receptionist		
		97.5	Florist		
		97.5	Occupational therapist		
		97.5	Dietician, dietician technician		
				98.5	Meat cutter and wrapper
				98.5	Barber

Table B (continued)

EXHIBIT 8

Short-Term and Long-Term Goals

- Table A. Goal (Short-Term, Long-Term) for the Occupations Chosen by Students, by Sex and Total Group

- Table B. Goal (Short-Term, Long-Term) for the Occupations Chosen by Parents for Their 11th Graders, by Sex of Students and Total Group

TABLE A

GOAL (SHORT-TERM, LONG-TERM) FOR THE OCCUPATIONS CHOSEN BY STUDENTS, BY SEX AND TOTAL GROUP

Occupation	Female				Male				All Students			
	Short-Term		Long-Term		Short-Term		Long-Term		Short-Term		Long-Term	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
01. Accountant	29	42.6	39	57.4	19	26.0	54	74.0	48	34.0	93	66.0
02. Accounting clerk, bookkeeper	39	38.2	63	61.8	14	41.2	20	58.8	53	39.0	83	61.0
03. Actor, actress	13	22.8	44	77.2	15	34.1	29	65.9	29	28.7	72	71.3
04. Airline pilot, copilot	8	29.6	19	70.4	53	29.3	128	70.7	63	30.3	145	69.7
05. Airline steward, stewardess	146	56.4	113	43.6	5	38.5	8	61.5	154	56.6	118	43.4
06. Animal caretaker, trainer	46	49.5	47	50.5	24	60.0	16	40.0	70	52.6	63	47.4
07. Architect	13	33.3	17	56.7	66	33.3	132	66.7	79	34.6	149	65.4
08. Artist, commercial or graphic	48	42.1	66	57.9	41	33.6	81	66.4	88	37.3	148	62.7
09. Astronomer	6	27.3	16	72.7	13	36.1	23	63.9	19	32.8	39	67.2
10. Athlete, professional	12	44.4	15	55.6	127	43.2	167	56.8	136	42.4	185	57.6
11. Auto body repairman	2	100.0	0	0.0	59	45.0	72	55.0	63	47.4	70	52.6
12. Auto service station attendant	1	100.0	0	0.0	18	45.0	22	55.0	17	41.5	24	58.5
13. Barber	3	37.5	5	62.5	5	45.5	6	54.5	8	42.1	11	57.9
14. Beauty operator, cosmetologist	53	44.5	66	55.5	0	0.0	1	100.0	53	44.2	67	55.8
15. Biologist	8	25.0	24	75.0	4	12.1	29	87.9	13	20.0	52	80.0
16. Bricklayer, mason	1	20.0	4	80.0	38	50.7	37	49.3	38	47.5	42	52.5
17. Broadcasting technician, specialist	5	38.5	8	61.5	22	47.8	24	52.2	27	45.8	32	54.2
18. Carpenter	1	16.7	5	83.3	67	55.4	54	44.6	66	52.0	61	48.0
19. Cashier	75	77.3	22	22.7	11	57.9	8	42.1	87	75.0	29	25.0
20. Chemist	5	26.3	14	73.7	21	55.3	17	44.7	25	43.9	32	56.1
21. Child care worker	167	52.8	149	47.2	7	41.2	10	58.8	174	52.3	159	47.7
22. Clergy	2	33.3	4	66.7	3	13.6	19	86.4	5	17.9	23	82.1
23. Computer programmer, technician	27	28.1	69	71.9	39	31.5	85	68.5	67	30.5	153	69.5
24. Cook, chef	11	61.1	7	38.9	32	69.6	14	30.4	41	64.1	23	35.9
25. Dental hygienist, assistant	34	35.8	61	64.2	2	28.6	5	71.4	35	34.3	67	65.7
26. Dentist	2	16.7	10	83.3	13	16.5	66	83.5	18	19.8	73	80.2
27. Dietician, dietician technician	4	25.0	12	75.0	1	33.3	2	66.7	5	26.3	14	73.7
28. Draftsman	1	50.0	1	50.0	61	45.2	74	54.8	62	45.3	75	54.7
29. Ecologist	8	34.8	15	65.2	17	40.5	25	59.5	25	38.5	40	61.5
30. Electrician	1	12.5	7	87.5	59	42.4	80	57.6	62	42.2	85	57.8
31. Engineer, agricultural	0	0.0	1	100.0	7	22.6	24	77.4	7	21.9	25	78.1
32. Engineer, chemical	1	20.0	4	80.0	6	26.1	17	73.9	7	25.0	21	75.0
33. Engineer, civil	0	0.0	5	100.0	7	18.4	31	81.6	8	18.6	35	81.4
34. Engineer, electrical	1	50.0	1	50.0	26	29.5	62	70.5	27	30.0	63	70.0
35. Engineer, industrial	1	25.0	3	75.0	12	32.4	25	67.6	14	34.1	27	65.9
36. Engineer, mechanical	3	37.5	5	62.5	19	26.8	52	73.2	23	29.1	56	70.9
37. Engineering technician	0	0.0	4	100.0	10	27.0	27	73.0	10	24.4	31	75.6
38. Farmer	6	18.7	26	81.2	21	23.1	70	76.9	28	22.8	95	77.2
39. Florist	20	50.0	20	50.0	5	62.5	3	37.5	24	50.0	24	50.0
40. Food waiter, waitress	27	62.8	16	37.2	7	35.0	13	65.0	34	54.0	29	46.0
41. Forester	13	31.0	29	69.0	59	32.1	125	67.9	73	32.3	153	67.7
42. Geologist	1	50.0	1	50.0	8	38.1	13	61.9	7	30.4	16	69.6
43. Greenhouse operator, nurseryman	8	61.5	5	38.5	12	54.5	10	45.5	19	54.3	16	45.7
44. Home economist	38	44.7	47	55.3	2	50.0	2	50.0	40	44.9	49	55.1
45. Hotel or motel desk clerk	7	50.0	7	50.0	16	69.6	7	30.4	23	62.2	14	37.8

GOAL (SHORT-TERM, LONG-TERM) FOR THE OCCUPATIONS CHOSEN BY STUDENTS, BY SEX AND TOTAL GROUP

Occupation	Female				Male				All Students			
	Short-Term		Long-Term		Short-Term		Long-Term		Short-Term		Long-Term	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
46. Journalist	33	50.8	32	49.2	18	40.9	26	59.1	50	45.9	59	54.1
47. Keypunch operator	97	57.7	71	42.3	18	58.1	13	41.9	113	56.8	86	43.2
48. Laboratory technician	19	38.0	31	62.0	10	47.6	11	52.4	29	40.8	42	59.2
49. Landscaper	2	40.0	3	60.0	18	37.5	30	62.5	21	39.6	32	60.4
50. Landscape attendant	7	41.2	10	58.8	5	31.2	11	68.7	12	36.4	21	63.6
51. Lawyer	13	17.8	60	82.2	32	21.9	114	78.1	45	20.5	174	79.5
52. Library attendant, assistant	10	62.5	6	37.5	4	80.0	1	20.0	15	71.4	6	28.6
53. Machinist	1	100.0	0	0.0	18	34.0	35	66.0	19	35.2	35	64.8
54. Meat cutter and wrapper	0	0.0	0	0.0	8	66.7	4	33.3	8	66.7	4	33.3
55. Mechanic, air craft	0	0.0	0	0.0	28	37.8	46	62.2	27	36.5	47	63.5
56. Mechanic, auto	4	50.0	4	50.0	130	41.1	186	58.9	135	41.7	189	58.3
57. Mechanic, diesel and heavy equipment	0	0.0	0	0.0	20	25.6	58	74.4	21	26.9	57	73.1
58. Mechanic, refrigeration and air-conditioning	1	100.0	0	0.0	10	34.5	19	65.5	11	36.7	19	63.3
59. Mechanic, small engine	1	100.0	0	0.0	32	48.5	34	51.5	33	49.3	34	50.7
60. Medical secretary	41	41.0	59	59.0	2	33.3	4	66.7	42	39.6	64	60.4
61. Medical technologist	15	35.7	27	64.3	16	39.0	25	61.0	30	36.1	53	63.9
62. Meteorologist	0	0.0	2	100.0	5	27.8	13	72.2	4	20.0	16	80.0
63. Model	155	60.8	100	39.2	8	47.1	9	52.9	163	59.9	109	40.1
64. Musician, singer	55	37.4	92	62.6	78	32.8	160	67.2	133	34.5	252	65.5
65. Nurse	85	27.7	222	72.3	2	33.3	4	66.7	85	27.2	228	72.8
66. Occupational therapist	12	33.3	24	66.7	2	40.0	3	60.0	14	34.1	27	65.9
67. Office clerk	49	56.3	38	43.7	6	54.5	5	45.5	55	56.1	43	43.9
68. Painter, buildings	0	0.0	1	100.0	12	52.2	11	47.8	14	58.3	10	41.7
69. Pharmacist	7	23.3	23	76.7	12	22.6	41	77.4	19	22.9	64	77.1
70. Photographer	63	54.8	52	45.2	69	48.9	72	51.1	133	52.0	123	48.0
71. Physician, surgeon	8	12.7	55	87.3	8	8.2	90	91.8	16	9.9	145	90.1
72. Physicist	1	20.0	4	80.0	4	28.6	10	71.4	5	26.3	14	73.7
73. Police officer	17	32.1	36	67.9	79	38.0	129	62.0	97	37.2	164	62.8
74. Psychologist	28	22.4	97	77.6	8	17.8	37	82.2	35	20.6	135	79.4
75. Plumber	1	100.0	0	0.0	12	36.4	21	63.6	15	44.1	19	55.9
76. Printer, pressman	1	20.0	4	80.0	15	34.9	28	65.1	17	35.4	31	64.6
77. Radio and TV announcer	16	50.0	16	50.0	73	46.2	85	53.8	91	47.9	99	52.1
78. Radio and TV serviceman	1	100.0	0	0.0	32	49.2	33	50.8	35	53.0	31	47.0
79. Receptionist	131	60.1	87	39.9	0	0.0	0	0.0	127	58.3	91	41.7
80. Recording and film technician, specialist	13	37.1	22	62.9	55	39.0	86	61.0	68	38.6	108	61.4
81. Salesperson, agribusiness	1	100.0	0	0.0	3	60.0	2	40.0	4	66.7	2	33.3
82. Salesperson, automotive, recreational, and industrial	1	50.0	1	50.0	20	43.5	26	56.5	21	43.7	27	56.2
83. Salesperson, building materials and hardware	0	0.0	0	0.0	4	40.0	6	60.0	4	40.0	6	60.0
84. Salesperson, fashion merchandising	86	56.2	67	43.8	9	40.9	13	59.1	93	53.1	82	46.9
85. Salesperson, food merchandising	3	50.0	3	50.0	10	41.7	14	58.3	12	40.0	18	60.0
86. Salesperson, home furnishings and housewares	8	61.5	5	38.5	7	46.7	8	53.3	15	53.6	13	46.4

GOAL (SHORT-TERM, LONG-TERM) FOR THE OCCUPATIONS CHOSEN BY STUDENTS, BY SEX AND TOTAL GROUP

Occupation	Female				Male				All Students			
	Short-Term		Long-Term		Short-Term		Long-Term		Short-Term		Long-Term	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
87. Salesperson, insurance, investments, and real estate	3	17.6	14	82.4	24	41.4	34	58.6	27	36.0	48	64.0
88. School counselor	29	39.2	45	60.8	14	50.0	14	50.0	42	41.2	60	58.8
89. Secretary, stenographer	160	40.6	234	59.4	3	50.0	3	50.0	164	41.0	236	59.0
90. Social worker	116	36.9	198	63.1	31	43.7	40	56.3	150	39.0	235	61.0
91. Soil conservationist	3	50.0	3	50.0	9	50.0	9	50.0	12	50.0	12	50.0
92. Teacher, teacher aide	77	29.8	181	70.2	30	33.7	59	66.3	107	30.8	240	69.2
93. Telephone installer, repairman	1	16.7	5	83.3	31	50.0	31	50.0	31	45.6	37	54.4
94. Therapist	24	30.4	55	69.6	2	16.7	10	83.3	27	29.7	64	70.3
95. Tool and die maker	1	100.0	0	0.0	17	42.5	23	57.5	19	46.3	22	53.7
96. Truck driver	4	40.0	6	60.0	146	49.2	151	50.8	147	47.9	160	52.1
97. Veterinarian	22	20.8	84	79.2	21	26.2	59	73.7	42	22.6	144	77.4
98. Welder	0	0.0	0	0.0	56	50.5	55	49.5	57	51.4	54	48.6
99. Other --	67	25.2	199	74.8	113	30.5	258	69.5	182	28.6	455	71.4

Table A (continued)

TABLE B

GOAL (SHORT-TERM, LONG-TERM) FOR THE OCCUPATIONS CHOSEN BY PARENTS FOR THEIR 11TH GRADERS, BY SEX OF STUDENTS AND TOTAL GROUP

Occupation	Parents of Females				Parents of Males				All Parents			
	Short-Term		Long-Term		Short-Term		Long-Term		Short-Term		Long-Term	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
01. Accountant	14	28.0	36	72.0	9	17.3	43	82.7	25	24.5	77	75.5
02. Accounting clerk, bookkeeper	30	37.5	50	62.5	3	42.9	4	57.1	31	35.6	56	64.4
03. Actor, actress	3	21.4	11	78.6	5	45.5	6	54.5	8	32.0	17	68.0
04. Airline pilot, copilot	2	33.3	4	66.7	10	19.6	41	80.4	13	22.8	44	77.2
05. Airline steward, stewardess	60	63.2	35	36.8	4	57.1	3	42.9	65	63.7	37	36.3
06. Animal caretaker, trainer	10	45.5	12	54.5	4	40.0	6	60.0	14	43.7	18	56.2
07. Architect	1	5.9	16	94.1	20	22.2	70	77.8	21	19.6	86	80.4
08. Artist, commercial or graphic	22	32.4	46	67.6	16	27.1	43	72.9	39	30.7	88	69.3
09. Astronomer	1	25.0	3	75.0	0	0.0	7	100.0	1	9.1	10	90.9
10. Athlete, professional	4	57.1	3	42.9	34	54.0	29	46.0	38	54.3	32	45.7
11. Auto body repairman	0	0.0	0	0.0	7	31.8	15	68.2	7	31.8	15	68.2
12. Auto service station attendant	0	0.0	0	0.0	5	83.3	1	16.7	4	66.7	2	33.3
13. Barber	0	0.0	0	0.0	1	33.3	2	66.7	1	33.3	2	66.7
14. Beauty operator, cosmetologist	21	34.4	40	65.6	3	60.0	2	40.0	24	36.4	42	63.6
15. Biologist	2	16.7	10	83.3	3	21.4	11	78.6	5	19.2	21	80.8
16. Bricklayer, mason	0	0.0	0	0.0	8	42.1	11	57.9	9	47.4	10	52.6
17. Broadcasting technician, specialist	0	0.0	4	100.0	4	25.0	12	75.0	4	20.0	16	80.0
18. Carpenter	0	0.0	0	0.0	14	50.0	14	50.0	14	50.0	14	50.0
19. Cashier	18	69.2	8	30.8	3	75.0	1	25.0	21	70.0	9	30.0
20. Chemist	6	46.2	7	53.8	5	33.3	10	66.7	12	42.9	16	57.1
21. Child care worker	42	46.2	49	53.8	0	0.0	3	100.0	44	46.8	50	53.2
22. Clergy	0	0.0	1	100.0	5	21.7	18	78.3	5	20.8	19	79.2
23. Computer programmer, technician	12	17.4	57	82.6	16	27.1	43	72.9	29	22.7	99	77.3
24. Cook, chef	3	75.0	1	25.0	5	62.5	3	37.5	8	66.7	4	33.3
25. Dental hygienist, assistant	16	18.8	69	81.2	2	40.0	3	60.0	18	20.0	72	80.0
26. Dentist	1	11.1	8	88.9	6	12.8	41	87.2	7	12.5	49	87.5
27. Dietician, dietician technician	6	37.5	10	62.5	1	100.0	0	0.0	7	41.2	10	58.8
28. Draftsman	1	100.0	0	0.0	18	36.7	31	63.3	19	38.0	31	62.0
29. Ecologist	3	17.6	14	82.4	6	28.6	15	71.4	8	21.1	30	78.9
30. Electrician	2	100.0	0	0.0	15	36.6	26	63.4	16	37.2	27	62.8
31. Engineer, agricultural	0	0.0	0	0.0	1	14.3	6	85.7	2	28.6	5	71.4
32. Engineer, chemical	1	100.0	0	0.0	0	0.0	6	100.0	1	14.3	6	85.7
33. Engineer, civil	0	0.0	2	100.0	3	10.3	26	89.7	3	9.7	28	90.3
34. Engineer, electrical	0	0.0	3	100.0	5	9.1	50	90.9	5	8.6	53	91.4
35. Engineer, industrial	0	0.0	1	100.0	9	34.6	17	65.4	10	37.0	17	63.0
36. Engineer, mechanical	1	20.0	4	80.0	9	21.4	33	78.6	10	21.3	37	78.7
37. Engineering technician	0	0.0	0	0.0	3	18.7	13	81.2	4	25.0	12	75.0
38. Farmer	0	0.0	1	100.0	4	28.6	10	71.4	4	26.7	11	73.3
39. Florist	7	46.7	8	53.3	1	100.0	0	0.0	8	50.0	8	50.0
40. Food waiter, waitress	6	66.7	3	33.3	2	40.0	3	60.0	7	50.0	7	50.0
41. Forester	1	14.3	6	85.7	14	29.8	33	70.2	16	29.6	38	70.4
42. Geologist	2	40.0	3	60.0	4	21.1	15	78.9	6	25.0	18	75.0
43. Greenhouse operator, nurseryman	2	66.7	1	33.3	2	50.0	2	50.0	4	57.1	3	42.9
44. Home economist	16	26.7	44	73.3	2	100.0	0	0.0	18	29.0	44	71.0
45. Hotel or motel desk clerk	2	100.0	0	0.0	2	66.7	1	33.3	4	80.0	1	20.0

GOAL (SHORT-TERM, LONG-TERM) FOR THE OCCUPATIONS CHOSEN BY PARENTS FOR THEIR 11TH GRADERS, BY SEX OF STUDENTS AND TOTAL GROUP

Occupation	Parents of Females				Parents of Males				All Parents			
	Short-Term		Long-Term		Short-Term		Long-Term		Short-Term		Long-Term	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
46. Journalist	19	34.5	36	65.5	9	39.1	14	60.9	30	38.5	48	61.5
47. Keypunch operator	39	46.4	45	53.6	3	42.9	4	57.1	40	44.0	51	56.0
48. Laboratory technician	15	39.5	23	60.5	4	28.6	10	71.4	19	36.5	33	63.5
49. Landscaper	2	100.0	0	0.0	6	60.0	4	40.0	8	66.7	4	33.3
50. Landscape attendant	2	40.0	3	60.0	2	33.3	4	66.7	4	36.4	7	63.6
51. Lawyer	5	11.4	39	88.6	10	14.9	57	85.1	14	12.6	87	87.4
52. Library attendant, assistant	12	66.7	6	33.3	3	100.0	0	0.0	15	71.4	6	28.6
53. Machinist	1	50.0	1	50.0	9	52.9	8	47.1	10	52.6	9	47.4
54. Meat cutter and wrapper	0	0.0	0	0.0	1	50.0	1	50.0	1	50.0	1	50.0
55. Mechanic, air craft	0	0.0	0	0.0	9	33.3	18	66.7	9	33.3	18	66.7
56. Mechanic, auto	0	0.0	2	100.0	31	42.5	42	57.5	30	40.0	45	60.0
57. Mechanic, diesel and heavy equipment	0	0.0	0	0.0	4	28.6	10	71.4	6	42.9	8	57.1
58. Mechanic, refrigeration and air-conditioning	0	0.0	0	0.0	3	21.4	11	78.6	3	21.4	11	78.6
59. Mechanic, small engine	0	0.0	1	100.0	7	58.3	5	41.7	8	61.5	5	38.5
60. Medical secretary	19	29.7	45	70.3	1	33.3	2	66.7	19	28.4	48	71.6
61. Medical technologist	16	40.0	24	60.0	7	43.7	9	56.2	25	44.6	31	55.4
62. Meteorologist	2	50.0	2	50.0	4	33.3	8	66.7	6	37.5	10	62.5
63. Model	34	54.8	28	45.2	4	50.0	4	50.0	39	55.7	31	44.3
64. Musician, singer	16	33.3	32	66.7	32	46.4	37	53.6	49	41.9	68	58.1
65. Nurse	43	21.6	156	78.4	3	30.0	7	70.0	44	21.1	165	78.9
66. Occupational therapist	4	20.0	16	80.0	0	0.0	1	100.0	4	19.0	17	81.0
67. Office clerk	29	56.9	22	43.1	2	66.7	1	33.3	31	57.4	23	42.6
68. Painter, buildings	0	0.0	0	0.0	6	85.7	1	14.3	6	85.7	1	14.3
69. Pharmacist	2	11.8	15	88.2	5	14.7	29	85.3	9	17.6	42	82.4
70. Photographer	14	48.3	15	51.7	8	30.8	18	69.2	22	40.0	33	60.0
71. Physician, surgeon	7	17.9	32	82.1	1	1.6	61	98.4	9	8.9	92	91.1
72. Physicist	1	20.0	4	80.0	1	14.3	6	85.7	2	16.7	10	83.3
73. Police officer	3	23.1	10	76.9	14	38.9	22	61.1	16	32.7	33	67.3
74. Psychologist	11	22.0	39	78.0	3	33.3	6	66.7	12	20.3	47	79.7
75. Plumber	0	0.0	0	0.0	4	30.8	9	69.2	4	30.8	9	69.2
76. Printer, pressman	1	50.0	1	50.0	5	38.5	8	61.5	6	40.0	9	60.0
77. Radio and TV announcer	5	41.7	7	58.3	22	37.9	36	62.1	29	41.4	41	58.6
78. Radio and TV serviceman	0	0.0	0	0.0	6	31.6	13	68.4	7	36.8	12	63.2
79. Receptionist	64	62.7	38	37.3	1	100.0	0	0.0	65	63.1	38	36.9
80. Recording and film technician, specialist	4	36.4	7	63.6	9	23.1	30	76.9	13	26.0	37	74.0
81. Salesperson, agribusiness	0	0.0	1	100.0	2	66.7	1	33.3	3	75.0	1	25.0
82. Salesperson, automotive, recreational, and industrial	0	0.0	0	0.0	7	58.3	5	41.7	7	58.3	5	41.7
83. Salesperson, building materials and hardware	0	0.0	0	0.0	2	66.7	1	33.3	2	66.7	1	33.3
84. Salesperson, fashion merchandising	22	46.8	25	53.2	3	50.0	3	50.0	26	49.1	27	50.9
85. Salesperson, food merchandising	2	40.0	3	60.0	3	42.9	4	57.1	5	41.7	7	58.3
86. Salesperson, home furnishings and housewares	2	66.7	1	33.3	4	100.0	0	0.0	6	85.7	1	14.3

GOAL (SHORT-TERM, LONG-TERM) FOR THE OCCUPATIONS CHOSEN BY PARENTS FOR THEIR 11TH GRADERS BY SEX OF STUDENTS AND TOTAL GROUP

Occupation	Parents of Females				Parents of Males				All Parents			
	Short-Term		Long-Term		Short-Term		Long-Term		Short-Term		Long-Term	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
87. Salesperson, insurance, investments, and real estate	3	25.0	9	75.0	12	41.4	17	58.6	15	36.6	26	63.4
88. School counselor	11	27.5	29	72.5	1	33.3	2	66.7	12	27.9	31	72.1
89. Secretary, stenographer	92	41.4	130	58.6	4	66.7	2	33.3	97	42.5	131	57.5
90. Social worker	47	26.7	129	73.3	8	47.1	9	52.9	57	29.5	136	70.5
91. Soil conservationist	0	0.0	3	100.0	8	53.3	7	46.7	8	44.4	10	55.6
92. Teacher, teacher aide	35	20.8	133	79.2	12	32.4	25	67.6	49	23.9	156	76.1
93. Telephone installer, repairman	1	33.3	2	66.7	6	28.6	15	71.4	7	29.2	17	70.8
94. Therapist	9	16.4	46	83.6	0	0.0	1	100.0	9	16.1	47	83.9
95. Tool and die maker	0	0.0	1	100.0	4	30.8	9	69.2	4	28.6	10	71.4
96. Truck driver	1	33.3	2	66.7	20	47.6	22	52.4	21	46.7	24	53.3
97. Veterinarian	5	10.6	42	89.4	5	10.6	42	89.4	10	10.6	84	89.4
98. Welder	0	0.0	0	0.0	13	50.0	13	50.0	12	46.2	14	53.8
99. Other --	26	25.0	78	75.0	25	25.5	73	74.5	52	25.7	150	74.3

Table B (continued)

EXHIBIT 9

Questionnaire and Cover Letters

Opinion Survey of Selected School Personnel

- Memo from Dr. Elbert D. Brooks to All Metro School Principals
- Memo from Dr. Elbert D. Brooks to All Faculty Advisory Committee Members, Counselors, Principals, and Assistant Principals
- Questionnaire and Answer Sheet for Survey titled "Opinions of Selected School Personn

Metropolitan Public Schools

2601 BRANSFORD AVENUE
NASHVILLE, TENN. 37204

ELBERT D. BROOKS
DIRECTOR OF SCHOOLS

MEMORANDUM

TO: All Metro School Principals

FROM: Elbert D. Brooks

DATE: March 26, 1975

SUBJECT: Survey of School Personnel for Vocational Education Planning Purposes

As many of you know, Ohio State University is assisting the Nashville-Metro Public Schools in determining how we should proceed in expanding and improving vocational education in our comprehensive high schools. Surveys are already underway to assess (1) the employment demands of various firms and agencies in the community, (2) the occupational interests of students, and (3) the occupational expectations parents have for these students.

This week we want to obtain the opinions of the following groups of school personnel in order to strengthen the base for vocational education planning:

1) The Faculty Advisory Committee members in each of Metro's 137 school buildings
2) All junior and senior high Counselors
3) All senior high Principals and Assistant Principals

Attached are copies of the survey form and answer sheets. Please distribute a set of these materials as soon as possible to each person on your staff in the above categories.

Ask each person to complete the survey and return to your office by Friday morning, April 4. Then, mail the completed forms from your school (in a single package) to Mr. Hank Miller, Director of Vocational Education, 2601 Bransford Avenue. Please get these in the mail by the end of the day on Friday.

Thank you!

Elbert D. Brooks

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Metropolitan Public Schools

2601 BRANSFORD AVENUE
NASHVILLE, TENN. 37204

ELBERT D. BROOKS
DIRECTOR OF SCHOOLS

MEMORANDUM

TO: All Faculty Advisory Committee Members, Counselors, Principals, and Assistant Principals

FROM: Elbert D. Brooks

DATE: March 31, 1975

SUBJECT: Need for Your Inputs to Vocational Education Planning

Ohio State University is assisting the Nashville-Metro Public Schools in determining how we should proceed in expanding and improving vocational education in our comprehensive high schools. Surveys are already underway to assess (1) the employment demands of various firms and agencies in the community, (2) the occupational interests of students, and (3) the occupational expectations parents have for these students.

This week we want to obtain your opinions in order to strengthen the base for vocational education planning. Please complete the attached survey materials and return them to the Principal's Office by no later than Friday morning, **April 4, 1975.**

Many thanks for your cooperation!

Elbert D. Brooks

EDB:fd

Metropolitan Public Schools
2601 BRANSFORD AVENUE
NASHVILLE, TENN. 37204

OPINIONS OF SELECTED SCHOOL PERSONNEL . . .

Part of a Comprehensive Needs Assessment
for Vocational Education Planning*

Purpose: To solicit your help in making Metro schools better! Your opinions are needed regarding career areas which should be considered in the planning of curricula for the comprehensive high schools. Your responses to this survey are solicited and will be appreciated.

Please respond at your earliest convenience. Your responses will be anonymous, so please be candid!

Instructions

Please respond to each item by filling in the appropriate circle on your answer sheet. Use a No. 2 pencil to mark your responses.

Do not place your name or any identification numbers on the answer sheet.

*This survey is being done for the Nashville-Davidson County Metropolitan Public Schools by Ohio State University, Columbus, Ohio.

Please indicate how important you feel it is for consideration to be given to Metro's comprehensive high school curricula providing for each of the following occupations. Use the following codes:

A= Not Important
B= Somewhat Important
C= Important
D= Very Important
E= Not Sure

01. Accountant
02. Accounting clerk, bookkeeper
03. Actor, actress
04. Airline pilot, copilot
05. Airline steward, stewardess
06. Animal caretaker, trainer
07. Architect
08. Artist, commercial or graphic
09. Astronomer
10. Athlete, professional
11. Auto body repairman
12. Auto service station attendant
13. Barber
14. Beauty operator, cosmetologist
15. Biologist
16. Bricklayer, mason
17. Broadcasting technician, specialist
18. Carpenter
19. Cashier
20. Chemist
21. Child care worker
22. Clergy
23. Computer programmer, technician
24. Cook, chef
25. Dental hygienist, assistant
26. Dentist
27. Dietician, dietician technician
28. Draftsman
29. Ecologist
30. Electrician
31. Engineer, agricultural
32. Engineer, chemical
33. Engineer, civil
34. Engineer, electrical
35. Engineer, industrial
36. Engineer, mechanical
37. Engineering technician
38. Farmer
39. Florist
40. Food waiter, waitress
41. Forester
42. Geologist
43. Greenhouse operator, nurseryman
44. Home economist
45. Hotel or motel desk clerk
46. Journalist
47. Keypunch operator
48. Laboratory technician
49. Landscaper
50. Landscape attendant
51. Lawyer
52. Library attendant, assistant
53. Machinist
54. Meat cutter and wrapper
55. Mechanic, air craft
56. Mechanic, auto
57. Mechanic, diesel and heavy equipment
58. Mechanic, refrigeration and air-conditioning
59. Mechanic, small engine
60. Medical secretary
61. Medical technologist
62. Meteorologist
63. Model
64. Musician, singer
65. Nurse
66. Occupational Therapist
67. Office clerk
68. Painter, buildings
69. Pharmacist
70. Photographer
71. Physician, surgeon
72. Physicist
73. Police officer
74. Psychologist
75. Plumber
76. Printer, pressman
77. Radio and TV announcer
78. Radio and TV serviceman
79. Receptionist
80. Recording and film technician, specialist
81. Salesperson, agribusiness
82. Salesperson, automotive, recreational, and industrial
83. Salesperson, building materials and hardware
84. Salesperson, fashion merchandising
85. Salesperson, food merchandising
86. Salesperson, home furnishings and housewares
87. Salesperson, insurance, investments, and real estate
88. School counselor
89. Secretary, stenographer
90. Social worker
91. Soil conservationist
92. Teacher, teacher aide
93. Telephone installer, repairman
94. Therapist
95. Tool and die maker
96. Truck driver
97. Veterinarian
98. Welder

99. Does your school offer enough courses in career or vocational education?

A = Yes
B = No
C = Not Sure

100. Do you support the idea of high school student internship programs in the community (full-time work for one semester with no class attendance)?

A = Yes
B = No
C = Not Sure

101. This school offers a good number and variety of courses to fit students interests and needs.

A = Strongly Agree
B = Agree
C = Disagree
D = Strongly Disagree
E = Not Sure

102. Please indicate your present position by filling in the appropriate circle on your answer sheet. Use the following codes: (one choice only)

A = Teacher
B = Counselor
C = Administrator

103. Specify your primary area of responsibility, using the following codes on your answer sheet: (one choice only)

A = Elementary School
B = Junior High School
C = Senior High School

104. Finally, if you have additional suggestions or ideas for the improvement of vocational education offerings, feel free to write them on a separate sheet of paper and clip (not staple) it to your answer sheet.

THANK YOU FOR YOUR COOPERATION!

NAME

GENERAL PURPOSE ANSWER SHEET

FOR PROCESSING BY NATIONAL COMPUTER SYSTEMS 4401 West 76th St., Minneapolis, Minn.

EXAMPLE

1 (T) (F) ○ ○ ○ WRONG

2 (T) (F) ○ ○ ○ WRONG

3 (T) (F) ○ ○ ○ WRONG

4 (T) (F) ○ ○ ○ RIGHT

IMPORTANT DIRECTIONS FOR MARKING ANSWERS

Use black lead pencil only (#2½ or softer.
Make heavy black marks that fill the circle completely.
Erase clearly any answer you wish to change.
Make no stray marks on this answer sheet.

← REFER TO THESE EXAMPLES BEFORE STARTING PRACTICE EXERCISES →

PRACTICE

	A	B	C	D	E
1	(T)	(F)	○	○	○
2	(T)	(F)	○	○	○
3	(T)	(F)	○	○	○
4	(T)	(F)	○	○	○

	A	B	C	D	E
1	(T)	(F)	○	○	○
2	(T)	(F)	○	○	○
3	(T)	(F)	○	○	○
4	(T)	(F)	○	○	○
5	(T)	(F)	○	○	○
6	(T)	(F)	○	○	○
7	(T)	(F)	○	○	○
8	(T)	(F)	○	○	○
9	(T)	(F)	○	○	○
10	(T)	(F)	○	○	○
11	(T)	(F)	○	○	○
12	(T)	(F)	○	○	○
13	(T)	(F)	○	○	○
14	(T)	(F)	○	○	○
15	(T)	(F)	○	○	○
16	(T)	(F)	○	○	○
17	(T)	(F)	○	○	○
18	(T)	(F)	○	○	○
19	(T)	(F)	○	○	○
20	(T)	(F)	○	○	○
21	(T)	(F)	○	○	○
22	(T)	(F)	○	○	○
23	(T)	(F)	○	○	○
24	(T)	(F)	○	○	○
25	(T)	(F)	○	○	○
26	(T)	(F)	○	○	○
27	(T)	(F)	○	○	○
28	(T)	(F)	○	○	○
29	(T)	(F)	○	○	○
30	(T)	(F)	○	○	○
31	(T)	(F)	○	○	○
32	(T)	(F)	○	○	○
33	(T)	(F)	○	○	○
34	(T)	(F)	○	○	○
35	(T)	(F)	○	○	○
36	(T)	(F)	○	○	○
37	(T)	(F)	○	○	○
38	(T)	(F)	○	○	○
39	(T)	(F)	○	○	○
40	(T)	(F)	○	○	○
41	(T)	(F)	○	○	○
42	(T)	(F)	○	○	○
43	(T)	(F)	○	○	○
44	(T)	(F)	○	○	○
45	(T)	(F)	○	○	○
46	(T)	(F)	○	○	○
47	(T)	(F)	○	○	○
48	(T)	(F)	○	○	○
49	(T)	(F)	○	○	○
50	(T)	(F)	○	○	○
51	(T)	(F)	○	○	○
52	(T)	(F)	○	○	○
53	(T)	(F)	○	○	○
54	(T)	(F)	○	○	○
55	(T)	(F)	○	○	○
56	(T)	(F)	○	○	○
57	(T)	(F)	○	○	○
58	(T)	(F)	○	○	○
59	(T)	(F)	○	○	○
60	(T)	(F)	○	○	○

	A	B	C	D	E
61	(T)	(F)	○	○	○
62	(T)	(F)	○	○	○
63	(T)	(F)	○	○	○
64	(T)	(F)	○	○	○
65	(T)	(F)	○	○	○
66	(T)	(F)	○	○	○
67	(T)	(F)	○	○	○
68	(T)	(F)	○	○	○
69	(T)	(F)	○	○	○
70	(T)	(F)	○	○	○
71	(T)	(F)	○	○	○
72	(T)	(F)	○	○	○
73	(T)	(F)	○	○	○
74	(T)	(F)	○	○	○
75	(T)	(F)	○	○	○
76	(T)	(F)	○	○	○
77	(T)	(F)	○	○	○
78	(T)	(F)	○	○	○
79	(T)	(F)	○	○	○
80	(T)	(F)	○	○	○
81	(T)	(F)	○	○	○
82	(T)	(F)	○	○	○
83	(T)	(F)	○	○	○
84	(T)	(F)	○	○	○
85	(T)	(F)	○	○	○
86	(T)	(F)	○	○	○
87	(T)	(F)	○	○	○
88	(T)	(F)	○	○	○
89	(T)	(F)	○	○	○
90	(T)	(F)	○	○	○
91	(T)	(F)	○	○	○
92	(T)	(F)	○	○	○
93	(T)	(F)	○	○	○
94	(T)	(F)	○	○	○
95	(T)	(F)	○	○	○
96	(T)	(F)	○	○	○
97	(T)	(F)	○	○	○
98	(T)	(F)	○	○	○
99	(T)	(F)	○	○	○
100	(T)	(F)	○	○	○
101	(T)	(F)	○	○	○
102	(T)	(F)	○	○	○
103	(T)	(F)	○	○	○
104	(T)	(F)	○	○	○
105	(T)	(F)	○	○	○
106	(T)	(F)	○	○	○
107	(T)	(F)	○	○	○
108	(T)	(F)	○	○	○
109	(T)	(F)	○	○	○
110	(T)	(F)	○	○	○
111	(T)	(F)	○	○	○
112	(T)	(F)	○	○	○
113	(T)	(F)	○	○	○
114	(T)	(F)	○	○	○
115	(T)	(F)	○	○	○
116	(T)	(F)	○	○	○
117	(T)	(F)	○	○	○
118	(T)	(F)	○	○	○
119	(T)	(F)	○	○	○
120	(T)	(F)	○	○	○

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EXHIBIT 10

Occupational Ratings and Comments

Opinion Survey of Selected School Personnel

- Table A. Importance Ratings of Occupations for Curricular Coverage, by Selected School Personnel
- Table B. Importance Ratings of Occupations for Curricular Coverage, by Teachers
- Table C. Importance Ratings of Occupations for Curricular Coverage, by Counselors
- Table D. Importance Ratings of Occupations for Curricular Coverage, by Secondary School Administrators
- Open-ended Responses from the Survey "Opinions of Selected School Personnel"

TABLE A

IMPORTANCE RATINGS OF OCCUPATIONS FOR CURRICULAR COVERAGE,
BY SELECTED SCHOOL PERSONNEL
(n= 770)

Occupation	Percentages Responding to Each Category on Importance for Coverage in Curriculum				
	Not Important	Somewhat Important	Important	Very Important	Not Sure
01. Accountant	6.6	17.4	48.4	24.5	1.9
02. Accounting clerk, bookkeeper	1.4	11.9	43.5	41.4	0.6
03. Actor, actress	35.5	38.3	14.4	2.2	9.3
04. Airline pilot, copilot	30.1	31.9	21.6	7.8	7.3
05. Airline steward, stewardess	30.5	29.7	26.2	6.5	5.8
06. Animal caretaker, trainer	24.9	29.7	30.0	7.8	6.0
07. Architect	7.3	19.6	41.6	28.2	1.8
08. Artist, commercial or graphic	1.7	13.9	41.9	40.8	0.6
09. Astronomer	20.5	33.4	29.1	9.1	6.8
10. Athlete, professional	23.8	27.7	30.3	13.9	3.1
11. Auto body repairman	2.1	7.0	31.8	57.9	0.4
12. Auto service station attendant	15.7	20.0	33.2	26.8	3.1
13. Barber	8.3	21.6	43.5	23.9	1.9
14. Beauty operator, cosmetologist	6.1	15.5	41.7	34.8	1.2
15. Biologist	8.4	19.4	40.6	26.5	3.6
16. Bricklayer, mason	2.5	13.9	36.5	45.1	1.3
17. Broadcasting technician, specialist	4.5	21.3	42.9	28.2	2.2
18. Carpenter	1.0	10.1	36.4	50.4	1.0
19. Cashier	10.8	22.6	36.9	27.0	1.7
20. Chemist	8.2	20.5	38.8	28.4	3.1
21. Child care worker	5.5	17.7	35.2	38.8	1.9
22. Clergy	25.2	22.1	26.8	14.5	10.0
23. Computer programmer, technician	1.4	9.5	37.8	49.2	1.0
24. Cook, chef	7.3	22.6	38.2	29.6	1.3
25. Dental hygienist, assistant	5.7	17.4	43.8	30.1	2.1
26. Dentist	16.6	21.6	33.4	21.2	6.2
27. Dietician, dietician technician	3.0	21.2	44.3	28.6	2.1
28. Draftsman	2.2	15.5	43.5	35.7	1.7
29. Ecologist	7.7	23.8	38.3	24.9	4.2
30. Electrician	1.4	7.7	34.7	53.8	0.9
31. Engineer, agricultural	10.8	19.4	39.2	24.5	5.2
32. Engineer, chemical	12.3	21.6	38.8	20.6	5.7
33. Engineer, civil	11.4	19.6	42.9	19.4	5.8
34. Engineer, electrical	11.0	18.3	40.6	24.2	4.8
35. Engineer, industrial	11.3	20.5	39.6	23.0	5.1
36. Engineer, mechanical	10.0	18.4	41.2	25.1	4.5
37. Engineering technician	7.5	18.2	38.2	29.0	6.0
38. Farmer	8.4	17.4	35.5	34.2	3.4
39. Florist	11.7	37.4	33.6	14.0	2.9
40. Food waiter, waitress	19.7	28.2	29.0	19.5	3.0
41. Forester	9.1	27.0	40.8	18.1	4.5
42. Geologist	12.1	30.3	37.5	13.2	6.1
43. Greenhouse operator, nurseryman	8.7	27.8	38.8	20.8	3.4
44. Home economist	4.9	17.8	43.4	31.0	1.9
45. Hotel or motel desk clerk	27.3	26.2	27.8	13.5	3.9
46. Journalist	4.7	21.9	45.2	26.1	1.0
47. Keypunch operator	2.7	12.9	43.0	39.2	1.2
48. Laboratory technician	4.0	13.6	48.1	31.6	1.8
49. Landscaper	10.3	31.6	37.8	16.2	3.4
50. Landscape attendant	17.9	31.4	30.9	13.8	5.1
51. Lawyer	19.1	20.0	34.0	20.0	6.9
52. Library attendant, assistant	7.0	30.3	41.4	18.6	2.3
53. Machinist	2.6	9.4	41.9	42.6	3.5
54. Meat cutter and wrapper	13.2	26.8	33.0	22.9	3.1
55. Mechanic, air craft	5.1	21.8	38.3	30.6	3.5
56. Mechanic, auto	1.4	6.4	31.9	59.0	0.6
57. Mechanic, diesel and heavy equipment	2.7	10.3	38.7	44.8	2.6
58. Mechanic, refrigeration and air-conditioning	2.5	10.6	36.6	48.8	0.9
59. Mechanic, small engine	2.3	10.5	38.1	46.2	2.2
60. Medical secretary	6.0	21.7	41.9	27.0	2.6
61. Medical technologist	5.6	18.1	44.3	27.0	3.9
62. Meteorologist	16.6	33.4	29.4	11.7	7.9
63. Model	35.5	32.7	18.8	6.0	5.9

TABLE A (continued)

IMPORTANCE RATINGS OF OCCUPATIONS FOR CURRICULAR COVERAGE,
BY SELECTED SCHOOL PERSONNEL (n= 770)

Occupation	Percentages Responding to Each Category on Importance for Coverage in Curriculum: Not Important	Somewhat Important	Important	Very Important	Not Sure
64. Musician, singer	15.2	35.1	32.3	12.5	4.2
65. Nurse	6.4	9.7	39.5	40.4	2.7
66. Occupational therapist	8.7	17.7	39.9	25.5	6.5
67. Office clerk	6.1	19.4	42.5	28.8	1.9
68. Painter, buildings	9.6	24.8	35.5	26.1	1.9
69. Pharmacist	13.6	17.3	38.8	23.5	5.1
70. Photographer	6.9	25.6	42.9	21.8	1.7
71. Physician, surgeon	20.1	14.8	26.2	29.7	7.9
72. Physicist	19.1	19.4	31.0	22.2	7.1
73. Police officer	7.3	14.9	38.3	35.2	3.1
74. Psychologist	17.7	21.7	33.8	19.4	6.1
75. Plumber	2.6	10.3	36.8	48.0	1.6
76. Printer, pressman	2.6	15.8	42.3	35.8	2.2
77. Radio and TV announcer	10.1	28.1	39.4	18.8	2.6
78. Radio and TV serviceman	2.7	14.3	37.9	42.5	1.3
79. Receptionist	10.1	30.1	31.6	23.8	2.2
80. Recording and film technician, specialist	10.3	26.8	38.1	19.2	3.9
81. Salesperson, agribusiness	10.3	31.7	36.9	13.6	6.1
82. Salesperson, automotive, recreational, and industrial	9.9	31.9	36.6	16.0	4.7
83. Salesperson, building materials and hardware	9.9	31.7	38.2	15.2	3.9
84. Salesperson, fashion merchandising	11.8	32.5	32.5	13.6	4.3
85. Salesperson, food merchandising	9.6	28.4	40.4	16.8	3.6
86. Salesperson, home furnishings and housewares	10.6	31.3	38.8	14.5	3.2
87. Salesperson, insurance, investments, and real estate	8.6	26.2	41.4	19.9	2.7
88. School counselor	17.4	18.7	31.4	24.5	6.0
89. Secretary, stenographer	2.6	11.2	38.8	44.8	0.9
90. Social worker	14.5	20.1	36.8	21.8	4.8
91. Soil conservationist	10.6	26.6	37.5	19.5	4.9
92. Teacher, teacher aide	8.1	14.2	37.5	36.9	2.6
93. Telephone installer, repairman	8.7	20.3	39.1	28.7	2.6
94. Therapist	10.8	20.1	41.0	20.8	6.5
95. Tool and die maker	5.1	16.6	39.9	33.4	4.2
96. Truck driver	14.7	24.2	37.4	19.4	3.5
97. Veterinarian	15.5	20.1	38.3	19.4	5.6
98. Welder	3.2	13.6	38.7	40.9	1.8

TABLE B

IMPORTANCE RATINGS OF OCCUPATIONS FOR CURRICULAR COVERAGE, BY TEACHERS
(n= 583)

Occupation	Percentages Responding to Each Category on Importance for Coverage in Curriculum				
	Not Important	Somewhat Important	Important	Very Important	Not Sure
01. Accountant	6.0	18.2	48.2	24.7	2.2
02. Accounting clerk, bookkeeper	1.4	12.9	43.1	41.0	0.7
03. Actor, actress	36.9	37.7	13.7	1.7	8.6
04. Airline pilot, copilot	28.8	32.2	21.8	7.5	8.2
05. Airline steward, stewardess	32.8	28.8	24.7	6.0	6.5
06. Animal caretaker, trainer	24.9	30.9	27.8	8.2	6.9
07. Architect	7.4	20.4	40.7	28.3	2.1
08. Artist, commercial or graphic	1.9	14.9	42.5	38.9	0.9
09. Astronomer	22.1	33.3	27.4	8.9	7.2
10. Athlete, professional	22.1	28.8	30.4	13.9	3.6
11. Auto body repairman	2.2	8.6	34.5	53.9	0.5
12. Auto service station attendant	18.9	20.9	31.2	24.5	3.8
13. Barber	7.9	22.6	42.5	24.4	1.9
14. Beauty operator, cosmetologist	6.5	18.0	41.5	31.7	1.5
15. Biologist	8.6	20.1	40.0	26.8	3.6
16. Bricklayer, mason	2.7	16.3	39.5	39.8	1.2
17. Broadcasting technician, specialist	4.3	22.5	43.2	27.1	2.6
18. Carpenter	1.2	11.0	38.8	47.7	0.7
19. Cashier	1.2	23.7	35.0	35.9	2.2
20. Chemist	8.7	20.8	38.3	28.1	3.4
21. Child care worker	6.3	18.5	35.3	36.9	2.1
22. Clergy	24.9	22.8	26.1	15.4	9.8
23. Computer programmer, technician	1.5	10.3	39.1	46.8	1.2
24. Cook, chef	8.7	25.2	38.1	25.4	1.5
25. Dental hygienist, assistant	6.0	18.9	43.9	28.8	1.5
26. Dentist	16.8	22.3	32.9	21.8	5.8
27. Dietician, dietician technician	3.3	22.8	44.4	26.8	1.9
28. Draftsman	2.4	18.5	44.1	31.6	1.9
29. Ecologist	8.2	25.4	36.7	24.4	4.1
30. Electrician	1.7	8.7	36.5	50.6	0.7
31. Engineer, agricultural	9.9	20.2	38.4	24.9	5.7
32. Engineer, chemical	12.0	23.0	37.9	19.7	6.5
33. Engineer, civil	11.1	20.6	41.9	18.9	6.7
34. Engineer, electrical	10.8	18.9	40.5	23.7	5.1
35. Engineer, industrial	11.0	21.6	39.3	22.3	5.5
36. Engineer, mechanical	9.9	19.0	41.9	23.8	4.6
37. Engineering technician	7.9	19.6	37.2	27.6	7.0
38. Farmer	8.4	16.8	35.5	34.8	3.6
39. florist	13.0	39.3	32.1	12.0	3.4
40. Food waiter, waitress	23.8	29.7	25.6	17.0	[illegible]
41. Forester	9.8	25.9	41.0	17.8	5.1
42. Geologist	12.9	29.7	36.9	12.7	7.2
43. Greenhouse operator, nurseryman	10.1	30.0	37.1	18.[illegible]	3.9
44. Home economist	5.3	18.0	42.7	32.[illegible]	1.5
45. Hotel or motel desk clerk	32.4	25.9	24.9	11.0	4.[illegible]
46. Journalist	5.3	22.1	44.3	25.1	1.[illegible]
47. Keypunch operator	3.1	14.4	44.1	36.4	1.[illegible]
48. Laboratory technician	4.6	15.3	47.5	29.7	2.[illegible]
49. Landscaper	11.7	33.8	35.5	14.6	3.[illegible]
50. Landscape attendant	21.1	32.4	27.4	17.5	5.7
51. Lawyer	20.2	19.9	33.3	20.8	5.5
52. Library attendant, assistant	8.1	31.4	41.3	16.3	2.7
53. Machinist	2.9	10.8	43.7	39.3	3.4
54. Meat cutter and wrapper	14.9	28.8	32.1	20.1	3.3
55. Mechanic, air craft	5.1	23.3	38.[illegible]	29.3	3.8
56. Mechanic, auto	1.7	7.4	35.3	54.9	0.3
57. Mechanic, diesel and heavy equipment	2.7	11.7	40.3	41.9	3.[illegible]
58. Mechanic, refrigeration and air-conditioning	2.6	12.7	39.6	44.3	0.9
59. Mechanic, small engine	2.9	12.7	40.5	41.9	1.9
60. Medical secretary	6.9	24.0	40.0	25.9	3.[illegible]
61. Medical technologist	5.8	19.7	43.6	26.2	3.9
62. Meteorologist	17.7	33.4	27.8	12.4	8.1
63. Model	37.6	32.2	17.8	5.0	7.3

TABLE B

IMPORTANCE RATINGS OF OCCUPATIONS FOR CURRICULAR COVERAGE, BY TEACHERS
(n= 583)

Occupation	Percentages Responding to Each Category on Importance for Coverage in Curriculum				
	Not Important	Somewhat Important	Important	Very Important	Not Sure
64. Musician, singer	16.0	35.8	31.0	11.7	4.8
65. Nurse	7.5	10.1	41.2	37.7	2.2
66. Occupational therapist	8.6	18.7	40.7	23.8	7.0
67. Office clerk	7.5	21.4	41.9	26.4	1.9
68. Painter, buildings	11.5	26.1	35.8	22.6	3.4
69. Pharmacist	14.6	17.7	37.6	24.4	4.6
70. Photographer	8.4	26.4	41.3	20.9	1.7
71. Physician, surgeon	21.4	14.7	25.6	29.7	7.5
72. Physicist	20.2	19.6	30.7	22.1	6.5
73. Police officer	7.9	15.1	38.9	33.8	3.3
74. Psychologist	18.7	22.1	32.9	19.7	5.1
75. Plumber	2.7	11.1	39.3	44.6	1.5
76. Printer, pressman	2.7	18.9	43.2	31.7	2.4
77. Radio and TV announcer	11.7	28.3	39.5	17.0	2.9
78. Radio and TV serviceman	2.9	16.6	39.8	38.4	1.4
79. Receptionist	12.9	30.9	30.7	21.4	2.4
80. Recording and film technician, specialist	11.7	27.8	37.6	17.7	3.9
81. Salesperson, agribusiness	11.7	34.1	35.2	10.8	7.0
82. Salesperson, automotive, recreational, and industrial	11.7	34.3	35.3	12.5	5.5
83. Salesperson, building materials and hardware	11.8	33.8	36.0	12.5	4.8
84. Salesperson, fashion merchandising	14.8	34.0	34.1	11.5	4.5
85. Salesperson, food merchandising	12.0	30.4	38.6	13.7	4.3
86. Salesperson, home furnishings and housewares	13.4	33.1	36.0	12.5	3.8
87. Salesperson, insurance, investments, and real estate	10.6	26.2	41.7	17.7	2.9
88. School counselor	18.9	18.7	31.0	24.2	5.5
89. Secretary, stenographer	2.9	11.0	41.5	42.7	0.9
90. Social worker	15.8	20.0	37.4	20.8	4.3
91. Soil conservationist	11.1	28.1	36.5	18.9	4.8
92. Teacher, teacher aide	8.6	13.7	37.6	37.6	2.1
93. Telephone installer, repairman	9.3	21.6	38.8	27.1	2.3
94. Therapist	11.7	20.8	39.5	21.4	6.0
95. Tool and die maker	6.0	19.6	39.5	29.2	5.1
96. Truck driver	16.3	24.2	37.9	17.3	3.6
97. Veterinarian	16.5	20.8	37.9	19.4	4.8
98. Welder	3.3	16.3	39.3	37.7	2.2

TABLE C

IMPORTANCE RATINGS OF OCCUPATIONS FOR CURRICULAR COVERAGE, BY COUNSELORS (n= 72)

Occupation	Percentages Responding to Each Category on Importance for Coverage in Curriculum: Not Important	Somewhat Important	Important	Very Important	Not Sure
01. Accountant	11.1	9.7	50.0	26.4	1.4
02. Accounting clerk, bookkeeper	1.4	6.9	43.1	47.2	1.4
03. Actor, actress	34.7	41.7	11.1	4.2	8.3
04. Airline pilot, copilot	36.1	26.4	26.4	5.6	5.6
05. Airline steward, stewardess	31.9	27.8	26.4	9.7	4.2
06. Animal caretaker, trainer	27.8	23.6	36.1	8.3	4.2
07. Architect	5.6	15.3	50.0	26.4	1.4
08. Artist, commercial or graphic	1.4	6.9	44.4	47.2	0.0
09. Astronomer	13.9	34.7	34.7	12.5	4.2
10. Athlete, professional	27.8	25.0	29.2	16.7	1.4
11. Auto body repairman	0.0	2.8	27.8	68.1	0.0
12. Auto service station attendant	5.6	13.9	33.3	44.4	0.0
13. Barber	6.9	12.5	52.8	26.4	1.4
14. Beauty operator, cosmetologist	2.8	5.6	37.5	54.2	0.0
15. Biologist	6.9	25.0	45.8	18.1	2.8
16. Bricklayer, mason	1.4	4.2	30.6	62.5	0.0
17. Broadcasting technician, specialist	5.6	18.1	47.2	26.4	1.4
18. Carpenter	0.0	6.9	29.2	62.5	0.0
19. Cashier	5.6	16.7	40.3	37.5	0.0
20. Chemist	4.2	20.8	48.6	23.6	2.8
21. Child care worker	2.8	11.1	33.3	52.8	0.0
22. Clergy	27.8	16.7	34.7	9.7	9.7
23. Computer programmer, technician	1.4	4.2	41.7	52.8	0.0
24. Cook, chef	2.8	13.9	44.4	38.9	0.0
25. Dental hygienist, assistant	4.2	11.1	41.7	38.9	4.2
26. Dentist	16.7	18.1	36.1	20.8	8.3
27. Dietician, dietician technician	4.2	12.5	50.0	31.9	1.4
28. Draftsman	2.8	2.8	44.4	48.6	1.4
29. Ecologist	6.9	20.8	45.8	22.2	4.2
30. Electrician	0.0	5.6	26.4	68.1	0.0
31. Engineer, agricultural	16.7	12.5	44.4	22.2	4.2
32. Engineer, chemical	13.9	19.4	41.7	22.2	2.8
33. Engineer, civil	13.9	16.7	44.4	22.2	2.8
34. Engineer, electrical	13.9	16.7	38.9	27.8	2.8
35. Engineer, industrial	13.9	16.7	37.5	29.2	2.8
36. Engineer, mechanical	12.5	16.7	34.7	33.3	2.8
37. Engineering technician	6.9	13.9	40.3	34.7	1.4
38. Farmer	9.7	18.1	37.5	30.6	2.8
39. Florist	8.3	29.2	40.3	19.4	2.8
40. Food waiter,waitress	8.3	22.2	31.9	36.1	0.0
41. Forester	8.3	34.7	44.4	9.7	2.8
42. Geologist	12.5	36.1	40.3	8.3	2.8
43. Greenhouse operator, nurseryman	2.8	23.6	44.4	26.4	2.8
44. Home economist	4.2	18.1	50.0	22.2	4.2
45. Hotel or motel desk clerk	12.5	23.6	34.7	26.4	1.4
46. Journalist	2.8	19.4	55.6	20.8	1.4
47. Keypunch operator	2.8	5.6	41.7	48.6	0.0
48. Laboratory technician	5.6	5.6	48.6	38.9	1.4
49. Landscaper	6.9	40.3	34.7	13.9	4.2
50. Landscape attendant	9.7	33.3	38.9	13.9	4.2
51. Lawyer	11.1	19.4	44.4	13.9	9.7
52. Library attendant, assistant	2.8	26.4	48.6	20.8	1.4
53. Machinist	2.8	2.8	38.9	54.2	1.4
54. Meat cutter and wrapper	11.1	18.1	36.1	33.3	1.4
55. Mechanic, air craft	5.6	18.1	38.9	33.3	4.2
56. Mechanic, auto	0.0	1.4	23.6	73.6	1.4
57. Mechanic, diesel and heavy equipment	2.8	8.3	36.1	51.4	1.4
58. Mechanic, refrigeration and air-conditioning	0.0	4.2	29.2	65.3	1.4
59. Mechanic, small engine	0.0	1.4	30.6	65.3	2.8
60. Medical secretary	4.2	8.3	52.8	31.9	2.8
61. Medical technologist	4.2	12.5	50.0	25.0	5.6
62. Meteorologist	18.1	36.1	31.9	6.9	5.6
63. Model	30.6	33.3	23.6	5.6	5.6
64. Musician, singer	4.2	43.1	38.9	12.5	1.4
65. Nurse	4.2	12.5	36.1	44.4	2.8

TABLE C

IMPORTANCE RATINGS OF OCCUPATIONS FOR CURRICULAR COVERAGE,
BY COUNSELORS (n= 72)

Occupation	Percentages Responding to Each Category on Importance for Coverage in Curriculum				
	Not Important	Somewhat Important	Important	Very Important	Not Sure
66. Occupational therapist	11.1	16.7	37.5	29.2	2.8
67. Office clerk	1.4	13.9	38.9	41.7	1.4
68. Painter, buildings	4.2	18.1	29.2	43.1	1.4
69. Pharmacist	12.5	16.7	41.7	19.4	5.6
70. Photographer	2.8	25.0	52.8	18.1	1.4
71. Physician, surgeon	16.7	12.5	31.9	30.6	8.3
72. Physicist	16.7	18.1	37.5	16.7	9.7
73. Police officer	6.9	12.5	33.3	44.4	2.8
74. Psychologist	15.3	19.4	37.5	20.8	6.9
75. Plumber	4.2	6.9	27.8	61.1	0.0
76. Printer, pressman	2.8	5.6	41.7	48.6	1.4
77. Radio and TV announcer	5.6	30.6	43.1	19.4	1.4
78. Radio and TV serviceman	2.8	5.6	27.8	61.1	0.0
79. Receptionist	1.4	31.9	22.2	38.9	1.4
80. Recording and film technician, specialist	8.3	26.4	38.9	18.1	5.6
81. Salesperson, agribusiness	4.2	27.8	40.3	25.0	2.8
82. Salesperson, automotive, recreational, and industrial	4.2	22.2	48.6	22.2	2.8
83. Salesperson, building materials and hardware	5.6	22.2	51.4	19.4	1.4
84. Salesperson, fashion merchandising	2.8	27.8	43.1	22.2	4.2
85. Salesperson, food merchandising	2.8	19.4	50.0	25.0	2.8
86. Salesperson, home furnishings and housewares	2.8	20.8	52.8	19.4	2.8
87. Salesperson, insurance, investments, and real estate	2.8	23.6	44.4	26.4	2.8
88. School counselor	12.5	18.1	29.2	34.7	5.6
89. Secretary, stenographer	0.0	12.5	31.9	54.2	0.0
90. Social worker	11.1	15.3	40.3	29.2	4.2
91. Soil conservationist	9.7	20.8	43.1	20.8	5.6
92. Teacher, teacher aide	4.2	16.7	40.3	33.3	4.2
93. Telephone installer, repairman	8.3	15.3	41.7	34.7	0.0
94. Therapist	9.7	18.1	50.0	16.7	5.6
95. Tool and die maker	4.2	5.6	41.7	47.2	1.4
96. Truck driver	9.7	23.6	34.7	29.2	2.8
97. Veterinarian	13.9	11.1	40.3	25.0	8.3
98. Welder	4.2	4.2	36.1	54.2	0.0

TABLE D

IMPORTANCE RATINGS OF OCCUPATIONS FOR CURRICULAR COVERAGE,
BY SECONDARY SCHOOL ADMINISTRATORS
(n= 115)

Occupation	Percentages Responding to Each Category on Importance for Coverage in Curriculum				
	Not Important	Somewhat Important	Important	Very Important	Not Sure
01. Accountant	7.0	18.3	48.7	22.6	0.9
02. Accounting clerk, bookkeeper	1.7	10.4	46.1	40.0	0.0
03. Actor, actress	28.7	39.1	20.0	3.5	7.0
04. Airline pilot, copilot	33.0	33.9	17.4	10.4	3.5
05. Airline steward, stewardess	18.3	35.7	33.9	7.0	3.5
06. Animal caretaker, trainer	23.5	27.8	37.4	5.2	2.6
07. Architect	7.8	18.3	40.9	28.7	0.9
08. Artist, commercial or graphic	0.9	13.0	37.4	46.1	0.0
09. Astronomer	16.5	33.0	33.9	7.8	6.1
10. Athlete, professional	29.6	23.5	30.4	12.2	1.7
11. Auto body repairman	2.6	1.7	20.9	72.2	0.0
12. Auto service station attendant	6.1	19.1	43.5	27.0	1.7
13. Barber	11.3	21.7	42.6	20.0	2.6
14. Beauty operator, cosmetologist	6.1	8.7	45.2	38.3	0.0
15. Biologist	8.7	12.2	40.9	30.4	4.3
16. Bricklayer, mason	1.7	7.8	25.2	60.9	2.6
17. Broadcasting technician, specialist	5.2	17.4	38.3	34.8	0.9
18. Carpenter	0.9	7.8	28.7	56.5	3.5
19. Cashier	7.0	20.9	44.3	26.1	0.0
20. Chemist	7.8	19.1	35.7	33.0	1.7
21. Child care worker	2.6	17.4	35.7	40.0	2.6
22. Clergy	25.2	21.7	25.2	13.0	11.3
23. Computer programmer, technician	0.9	8.7	28.7	59.1	0.9
24. Cook, chef	2.6	14.8	34.8	45.2	0.9
25. Dental hygienist, assistant	5.2	13.9	44.3	31.3	3.5
26. Dentist	15.7	20.0	37.4	18.3	7.0
27. Dietician, dietician technician	0.9	18.3	40.0	35.7	3.5
28. Draftsman	0.9	7.8	40.0	48.7	0.9
29. Ecologist	5.2	17.4	41.7	29.6	4.3
30. Electrician	0.9	3.5	30.4	60.9	2.6
31. Engineer, agricultural	11.3	19.1	40.0	24.3	3.5
32. Engineer, chemical	13.0	15.7	41.7	24.3	3.5
33. Engineer, civil	11.3	16.5	47.0	20.0	3.5
34. Engineer, electrical	10.4	16.5	42.6	24.3	4.3
35. Engineer, industrial	11.3	17.4	42.6	22.6	4.3
36. Engineer, mechanical	8.7	16.5	41.7	26.1	5.2
37. Engineering technician	6.1	13.9	41.7	32.2	3.5
38. Farmer	7.8	20.0	33.9	33.0	2.6
39. Florist	7.0	33.0	37.4	20.9	0.0
40. Food waiter, waitress	6.1	24.3	44.3	21.7	0.9
41. Forester	6.1	27.8	37.4	24.3	2.6
42. Geologist	7.8	29.6	39.1	19.1	2.6
43. Greenhouse operator, nurseryman	5.2	19.1	44.3	28.7	0.9
44. Home economist	3.5	16.5	42.6	32.2	2.6
45. Hotel or motel desk clerk	10.4	29.6	38.3	18.3	1.7
46. Journalist	2.6	22.6	43.5	29.6	0.0
47. Keypunch operator	0.9	9.6	38.3	47.8	0.9
48. Laboratory technician	0.0	10.4	50.4	36.5	0.9
49. Landscaper	5.2	14.8	51.3	26.1	0.9
50. Landscape attendant	7.0	25.2	43.5	20.0	2.6
51. Lawyer	18.3	20.9	31.3	20.0	7.8
52. Library attendant, assistant	4.3	27.0	37.5	28.7	0.9
53. Machinist	0.9	6.1	34.8	52.2	3.5
54. Meat cutter and wrapper	6.1	21.7	35.7	30.4	3.5
55. Mechanic, air craft	4.3	16.5	39.1	35.7	1.7
56. Mechanic, auto	0.9	4.3	20.0	70.4	1.7
57. Mechanic, diesel and heavy equipment	2.6	4.3	32.2	55.7	1.7
58. Mechanic, refrigeration and air-conditioning	3.5	4.3	27.0	61.7	0.9
59. Mechanic, small engine	0.9	5.2	30.4	56.5	3.5
60. Medical secretary	2.6	18.3	45.2	29.6	1.7
61. Medical technologist	5.2	13.0	44.3	32.2	2.6
62. Meteorologist	10.4	31.3	35.7	11.3	8.7
63. Model	27.8	34.8	20.9	11.3	3.5
64. Musician, singer	18.3	26.1	34.8	16.5	2.6
65. Nurse	1.7	6.1	33.0	51.3	5.2

TABLE D

IMPORTANCE RATINGS OF OCCUPATIONS FOR CURRICULAR COVERAGE,
BY SECONDARY SCHOOL ADMINISTRATORS (n= 115)

Occupation	Percentages Responding to Each Category on Importance for Coverage in Curriculum				
	Not Important	Somewhat Important	Important	Very Important	Not Sure
66. Occupational therapist	7.8	13.0	37.4	31.3	6.1
67. Office clerk	1.7	12.2	47.8	33.0	2.6
68. Painter, buildings	3.5	22.6	37.4	33.0	0.0
69. Pharmacist	9.6	15.7	43.5	21.7	7.0
70. Photographer	1.7	21.7	44.3	28.7	1.7
71. Physician, surgeon	15.7	16.5	26.1	29.6	9.6
72. Physicist	14.8	19.1	28.7	26.1	8.7
73. Police officer	4.3	15.7	38.3	36.5	2.6
74. Psychologist	13.9	20.9	35.7	16.5	10.4
75. Plumber	0.9	7.8	29.6	56.5	2.6
76. Printer, pressman	1.7	7.0	38.3	48.7	1.7
77. Radio and TV announcer	5.2	25.2	36.5	27.8	1.7
78. Radio and TV serviceman	1.7	7.8	34.8	51.3	1.7
79. Receptionist	1.7	25.2	41.7	26.1	1.7
80. Recording and film technician, specialist	4.3	21.7	40.0	27.8	2.6
81. Salesperson, agribusiness	7.0	21.7	43.5	20.9	3.5
82. Salesperson, automotive recreational, and industrial	4.3	26.1	35.7	29.6	1.7
83. Salesperson, building materials and hardware	2.6	27.0	40.9	26.1	0.9
84. Salesperson, fashion merchandising	2.6	27.8	44.3	19.1	3.5
85. Salesperson, food merchandising	1.7	24.3	43.5	27.0	0.9
86. Salesperson, home furnishings and housewares	1.7	28.7	44.3	21.7	0.9
87. Salesperson, insurance, investments, and real estate	1.7	27.8	38.3	27.0	1.7
88. School counselor	13.0	19.1	34.8	20.0	8.7
89. Secretary, stenographer	2.6	11.3	29.6	49.6	1.7
90. Social worker	10.4	24.3	31.3	22.6	7.8
91. Soil conservationist	8.7	22.6	39.1	21.7	5.2
92. Teacher, teacher aide	7.8	14.8	35.7	35.7	4.3
93. Telephone installer, repairman	6.1	16.5	39.1	33.0	2.6
94. Therapist	7.0	18.3	43.5	20.0	9.6
95. Tool and die maker	0.9	8.7	40.9	46.1	0.9
96. Truck driver	9.6	24.3	36.5	23.5	3.5
97. Veterinarian	11.3	22.6	39.1	15.7	7.8
98. Welder	2.6	6.1	37.4	48.7	0.9

OPEN-ENDED RESPONSES FROM THE SURVEY IN
NASHVILLE, "OPINIONS OF SELECTED SCHOOL PERSONNEL"

The last item (No. 104) on the survey questionnaire to faculty advisory committee members, counselors, and administrators in the Nashville schools read as follows:

> "Finally, if you have additional suggestions or ideas for the improvement of vocational education offerings, feel free to write them on a separate sheet of paper and clip it to your answer sheet."

The written comments to this item follow, with each number representing a different person's remarks. (Slight editing of punctuation, capitalization, verb tense, etc. may have been done in some cases to add clarity.)

1. I strongly feel that students deficient in the reading and mathematical skills should have remedial training to coincide the vocational curriculum.

2. Many of our schools are getting too small to offer the variety of courses and activities that would prepare them for vocational occupations. Consolidation of small schools could be a way to achieve the goal. (600-800 students)

3. We need teachers, equipment, and rooms -- not questionnaires. Questionnaires not clear as to school responsibility in preparing a doctor, as compared to a filling station attendant.

4. The object of a high school is not only to prepare children for getting a job, but for living. In all of the choices listed on this sheet, nothing is addressed to helping young people meet with and solve some everyday mundane problems, like balancing a family budget or arranging for credit, even balancing a check book.

   The school must not assume so large a share of vocational education that we forget that colleges and industry and government must share the burden in preparing young people to get and hold jobs. We must remember that for some the end of high school is the end of their chance to have their cultural horizons broadened; as well as an end to the time they can devote to learning about physical and emotional hygiene.

5. I feel that a strong need is present in elementary schools for a vocational-type instruction period or periods during the day; particularly geared for students less academically talented, but trainable. Some children with short attention spans could profit immeasurably by having time to work with their hands in carpentry. For example, we have a retarded boy who is extremely talented in art, and needs more time and opportunity to develop this potential.

6. Regarding question 100, I would favor internship programs; but they should include class attendance to discuss the programm on the job and to offer additional information the student might need to be more successful in the job placement.

7. I feel very strongly that the vocations and professions that require several years of advanced training do not belong in a high school, as high school students do not have sufficient background to pursue adequately the academic excellence required for competency and completion.

8. Many of my answers have been marked as "somewhat important". This means to me that 13 to 17 year old students are not ready to specialize in many of these areas and that our responsibility is to provide a solid base on which the student can build once he has reached the level where he can make intelligent decisions about his future. For example, many young boys would prefer to be a truck driver at age 14 or 15 but this is just a stage that many boys go through and in later years their interests will change completely.

   Another concern of mine is the implications that many of these offerings will have for staffing schools. Where will the school system find people qualified to provide instruction? We are considering so many areas where a very small number of students are involved that probably one hour per day would fulfill the need for that instructional program. Who will develop the curriculum for many of these areas?

   Isn't our present course offering adequate for providing the basis on which one must build at some future date in the academic area. I would hope that we could expand our vocational offerings to take care of those students who are not academically inclined, but let us not be naive and think that we can do the job of technical schools and colleges without proper fiscal resources.

9. I believe industrial arts education needs to be given the same consideration as vocational education. I qualify this by saying: spacewise, the area of equipment, twelve month basis for qualified teachers.

10. How about working on our legislature to amend the law keeping junior high school students from taking shop courses and other vocational training? Then, in the junior high school, the drop-out potentials could do an hour of reading, an hour of math and do vocational work and/or participate in the internship program the rest of the day. We are turning out too many youngsters who have no job skills, or they drop out at age 15 with no job skills, because someone said a student must be 15 before entering vocational training.

11. I have rated as low priority in the high school curriculum, the professions and other occupations that require college or advanced training (physician, lawyer, teacher, biologist, etc.). The reason is that most high schools offer adequate or better preparation for such occupations, but are woefully lacking in vocations that require no extended school but rather emphasizes on-the-job training (brickmason, plumber, etc.).

12. There is a strong need for vocational training for handicapped persons.

13. I feel that we must begin to offer more vocational and occupational courses to junior high school students. Students are dropping out of junior high now and/or not making it into high school where they could get into programs. I strongly urge that some type of pre-vocational courses be put into the curriculum of junior high schools.

14. By the tenth grade, students should either be in a vocational program or academic program. Students should not float from one program to another, not really doing justice to either. Thus, the academic program could be upgraded.

15. The emphasis in vocational education offerings should be in those areas which require specific training but not necessarily college training. In other words, the strongest areas in the vocational education program should be able to train students sufficiently for a job when they graduate. Certainly there should be introductory type course offerings for those who wish to pursue professional careers -- overview courses which would help a student decide if that would be the right area for him.

16. Why is there a need to call on an out-of-state university to do our survey work? Are we not able to take care of our own problems, needs or changes?

17. The school system (not individual teachers) needs to develop a realistic and workable apprenticeship program in as many areas of work as possible; so that students can receive true apprenticeship development of skills, while attending school, in specific areas of work in which the student has a strong interest. This is being done to some extent by the cooperative education teachers, but this effort needs to be structured and organized on a system-wide basis. Business and industry in the Metro Nashville community must commit themselves to this organized apprenticeship program. Everyone would benefit from the program and many tax dollars could be saved.

18. Begin a program of vocational education at the middle school level. The potential drop-out can be detected as early at fifth grade. Some specific program which could capture the interest in something other than the academics is desperately needed. Provide a carreer exploration program at middle school level which would allow some action -- learning not to be as broad a program as that in the high schools.

    Extend the vocational education program at high school level to include voluntary action learning for purpose of career exploration; joining with professional groups such as medical and legal organizations, A.F.L.-C.I.O., community services organizations, local, state, national government organizations, etc., to plan for needed training and on sight observation. This part of the program should be available to all students some time during their high school years. Instead of asking professionals to determine items 01 - 98, how about asking high school students and offer courses accordingly.

19. Provisions should be made for junior high students, maybe including some sixth graders, who can't achieve in the regular school program. Some type of vocational training along with some academic courses should be given to these students. For example, small motor and small appliance repair, upholstery, etc. This would help eliminate discipline problems caused by non-readers and very low achievers.

20. I suggest that something in the way of vocational education be done at the junior high level, since so many students drop out before high school.

21. I feel that we must be realistic in the things we try to do. I can see no success in trying to train lawyers, teachers, doctors, etc. He (the lawyer) should have an all around good academic program that will prepare him for further training. It seems to me, the high school should try to do the things they could be successful in doing.

22. My view is that more emphasis should be placed on practical jobs that the majority of students will do in life. More advanced jobs should be just introduced by one term courses, i.e., lawyer, veterinarian, etc.; because those who desire to do these jobs will also desire to go to college to obtain the extra education. I do hope, however, that every attempt will be made to keep students aware of their personal importance. Comprehensive schools are often guilty of losing students in the crowd and rush, and students have no chance to get teacher/school recognition that comes in smaller high schools.

23. I feel basic skills, attitudes, etc., need to be part of the elementary curriculum. Too many children are not able to compete academically in the fifth and sixth grades and become behavior problems, because the emphasis has been on pure academics. The reading and math need to be related to practical and functional meaning for the children. How it relates to their everyday life.

24. I do support the idea of high school internship programs if well planned, well supervised, and strict observance to the guildelines. If this is carelessly done, it is nothing more than a disappointment to those who might be helped, a way of getting credit with little effort, poor attendance "on the job", and a degrading of the school system in which it is allowed -- with the student beginning a career with little consideration for doing a job well.

    On the other hand, it could be most beneficial to both the student, as an "apprentice" or "intern", and the person or persons with whom the intern is working.

    A comprehensive evaluation should be required after such programs are in operation.

25. In my opinion, there is too much playing around in schools today and not enough of the BASIC educational needs required. Nearly everything on the enclosed sheet should be taken AFTER a child has graduated from a well-organized high school.

26. Instructors selected for vocational courses should have a proper background in Education. Preferably the choice of instructors should be from the present staff, if they are qualified.

27. The economy should dictate the advisability of internship programs.

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